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ENVIRONMENTAL HEALTH SERIES

Radiological Health

RADIOACTIVE DECAY CORRECTION FACTORS

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service

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RADIOACTIVE DECAY CORRECTION FACTORS

By

Kenneth H. Falter

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service

DIVISION OF RADIOLOGICAL HEALTH
Washington, D.C. 20201

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ABSTRACT

Tables of correction factors for radioactive decay are presented which facilitate the task of calculating the activity of a radioactive nuclide at a given time, given its activity at any other time. Tables are included for those nuclides which are commonly measured, those used as standards, and those used as tracers. In addition, the thorium, neptunium, uranium, and actinium decay series are included. Tables giving the fractional ingrowth of yttrium 90 into strontium 90 and of radon 222 into radium 226 are also presented.

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INTRODUCTION

Tables of correction factors for radioactive decay are presented to facilitate the task of calculating the activity of a radioactive nuclide at any given time, given its activity at any other time. To be of maximum service, tables are included for those nuclides which are most commonly measured, those used as standards, and those used as tracers. Because of their interest, the thorium, neptunium, uranium, and actinium decay series are also included. Nuclides with a half-life less than 1 minute or greater than 100 years were omitted with three exceptions: carbon 14, radium 226, and thorium 229.

As an additional aid to investigators, tables giving the fractional ingrowth of yttrium 90 into strontium 90 and of radon 222 into radium 226 are also presented.

These tables supplement and update the tables in the Radiological Health Handbook (*1*). Other tables, providing a different approach to the problem, have also been published (*2*) and are available elsewhere.

The factors are based on the equation which describes the rate of physical decay of radionuclides:

$$A_t = A_o e^{-\lambda t} \tag{1}$$

where

A_t is the activity at any time t,
A_o is the activity at zero time,
e is the base of natural logarithms,
λ is $\frac{\ln 2}{T_{1/2}}$ where $T_{1/2}$ is the half-life.

The factors in the tables are:

$$cf(t) = \frac{A_t}{A_o} = e^{-\lambda t} \tag{2}$$

where $cf(t)$ is the correction factor for time interval t.

These tables of factors were calculated from a computer program written for the IBM 1620 computer in the Fortran II symbolic language. Calculations are done in floating point arithmetic with a precision of eight significant figures, and the final answer is truncated to four decimal places. The tables are printed on the IBM 407 accounting machine.

Because of the truncation, a given factor may be low by 0.0001; the error in any correction factor is, thus, less than one-hundredth of one percent (0.01%).

In general, tables were calculated to a lower limit of about 0.1000, or approximately 3⅓ half-lives. The tables are entered by using the intervals at the top and left side of the page to determine the correction factor. If the activity is being calculated back to a previous time, divide by the correction factor. If activity is to be calculated to some future time, multiply by the factor to give the new activity. If it is necessary to calculate correction factors for times beyond the scope of this table, two or more factors may be combined to give this value. To do this, several correction factors are multiplied to give the desired factor. The factors are chosen so that their associated times add up to the desired time. For example, suppose the correction factor for actinium 225 is needed for 40 days, 10 hours of decay.

$$cf\ (33\ \text{days}) = 0.1015$$
$$cf\ (7\ \text{days}) = 0.6155$$
$$cf\ (10\ \text{hours}) = 0.9715$$

Note that the sum of the times is 40 days, 10 hours. The product of the correction factors is 0.0606 and is correct to three significant figures. In a chain multiplication such as this, four significant figures are carried in any intermediate product, and the final answer is rounded to three significant figures (*3*).

The fractional ingrowth tables give the activity of the daughter at any time t as a fraction of the activity of the parent at time $t=0$. These factors are based on the following equation:

$$f(t) = \frac{A_d(t)}{A_p(0)} = \frac{\lambda_d}{\lambda_d - \lambda_p}\left(e^{-\lambda_p t} - e^{-\lambda_d t}\right) \qquad (3)$$

where

$f(t)$ = fractional ingrowth after time t,
$A_d(t)$ = activity of the daughter after time t,
$A_p(0)$ = activity of the parent at time $t=0$,
$\lambda_d = \frac{\ln 2}{T_{½}}$ where $T_{½}$ is the half-life of the daughter,
$\lambda_p = \frac{\ln 2}{T_{½}'}$, where $T_{½}'$ is the half-life of the parent.

To find the activity of a parent nuclide at time $t=0$, given the activity of the daughter at time t, divide the daughter's activity by the appropriate fractional ingrowth factor. For example:

Yttrium 90 is allowed to grow into strontium 90 for 10 days, or 240 hours. The yttrium 90 is counted and yields 50 pc of activity. The activity of the strontium 90 at time $t=0$ is $\frac{50}{f(240)}=\frac{50}{0.9240}=54$ pc.

Half-life values were taken from the NAS Nuclear Data Sheets (*4*). It should be noted that the half-life values at the top of each page are carried out to two decimal places. This is caused by the computer format and does not imply two decimal place precision in all cases. The actual precision of the half-life values is as given in the NAS Nuclear Data Sheets.

Requests are invited from qualified investigators and students for calculations and tabulations of decay correction factors for additional nuclides. The nuclide and the desired time intervals should be specified.

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2. HUNTER, G. F., and V. F. MITCHELL. Tables of factors for correcting for radioactive decay. United Kingdom Atomic Energy Authority Report R4237 (January 1963).
3. SCARBOROUGH, J. B. Numerical Mathematical Analysis, 3d Edition. Johns Hopkins Press (1955), chapter 1.
4. NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL. Nuclear data sheets. Publications Office, 2101 Constitution Ave., Washington, D.C. 20418 (1958 *et seq.*).

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HALF-LIFE 10.00 DAYS CALCULATION INTERVAL 2.0 HOURS

DAYS	HOURS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
0.00	1.0000	.9942	.9885	.9828	.9771	.9715	.9659	.9603	.9548	.9493	.9438	.9384
1.00	.9330	.9276	.9223	.9170	.9117	.9064	.9012	.8960	.8908	.8857	.8806	.8755
2.00	.8705	.8655	.8605	.8555	.8506	.8457	.8408	.8360	.8312	.8264	.8216	.8169
3.00	.8122	.8075	.8029	.7982	.7937	.7891	.7845	.7800	.7755	.7711	.7666	.7622
4.00	.7578	.7534	.7491	.7448	.7405	.7362	.7320	.7278	.7236	.7194	.7153	.7112
5.00	.7071	.7030	.6989	.6949	.6909	.6869	.6830	.6790	.6751	.6712	.6674	.6635
6.00	.6597	.6559	.6521	.6484	.6446	.6409	.6372	.6336	.6299	.6263	.6227	.6191
7.00	.6155	.6120	.6085	.6049	.6015	.5980	.5946	.5911	.5877	.5843	.5810	.5776
8.00	.5743	.5710	.5677	.5644	.5612	.5579	.5547	.5515	.5484	.5452	.5421	.5389
9.00	.5358	.5328	.5297	.5266	.5236	.5206	.5176	.5146	.5116	.5087	.5058	.5028
10.00	.5000	.4971	.4942	.4914	.4885	.4857	.4829	.4801	.4774	.4746	.4719	.4692
11.00	.4665	.4638	.4611	.4585	.4558	.4532	.4506	.4480	.4454	.4428	.4403	.4377
12.00	.4352	.4327	.4302	.4277	.4253	.4228	.4204	.4180	.4156	.4132	.4108	.4084
13.00	.4061	.4037	.4014	.3991	.3968	.3945	.3922	.3900	.3877	.3855	.3833	.3811
14.00	.3789	.3767	.3745	.3724	.3702	.3681	.3660	.3639	.3618	.3597	.3576	.3556
15.00	.3535	.3515	.3494	.3474	.3454	.3434	.3415	.3395	.3375	.3356	.3337	.3317
16.00	.3298	.3279	.3260	.3242	.3223	.3204	.3186	.3168	.3149	.3131	.3113	.3095
17.00	.3077	.3060	.3042	.3024	.3007	.2990	.2973	.2955	.2938	.2921	.2905	.2888
18.00	.2871	.2855	.2838	.2822	.2806	.2790	.2773	.2757	.2742	.2726	.2710	.2694
19.00	.2679	.2664	.2648	.2633	.2618	.2603	.2588	.2573	.2558	.2543	.2529	.2514
20.00	.2500	.2485	.2471	.2457	.2442	.2428	.2414	.2400	.2387	.2373	.2359	.2346
21.00	.2332	.2319	.2305	.2292	.2279	.2266	.2253	.2240	.2227	.2214	.2201	.2188
22.00	.2176	.2163	.2151	.2138	.2126	.2114	.2102	.2090	.2078	.2066	.2054	.2042
23.00	.2030	.2018	.2007	.1995	.1984	.1972	.1961	.1950	.1938	.1927	.1916	.1905
24.00	.1894	.1883	.1872	.1862	.1851	.1840	.1830	.1819	.1809	.1798	.1788	.1778
25.00	.1767	.1757	.1747	.1737	.1727	.1717	.1707	.1697	.1687	.1678	.1668	.1658
26.00	.1649	.1639	.1630	.1621	.1611	.1602	.1593	.1584	.1574	.1565	.1556	.1547
27.00	.1538	.1530	.1521	.1512	.1503	.1495	.1486	.1477	.1469	.1460	.1452	.1444
28.00	.1435	.1427	.1419	.1411	.1403	.1395	.1386	.1378	.1371	.1363	.1355	.1347
29.00	.1339	.1332	.1324	.1316	.1309	.1301	.1294	.1286	.1279	.1271	.1264	.1257
30.00	.1250	.1242	.1235	.1228	.1221	.1214	.1207	.1200	.1193	.1186	.1179	.1173
31.00	.1166	.1159	.1152	.1146	.1139	.1133	.1126	.1120	.1113	.1107	.1100	.1094
32.00	.1088	.1081	.1075	.1069	.1063	.1057	.1051	.1045	.1039	.1033	.1027	.1021
33.00	.1015	.1009	.1003	.0997	.0992	.0986	.0980	.0975	.0969	.0963	.0958	.0952

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HALF-LIFE 21.20 YEARS CALCULATION INTERVAL 50.0 DAYS

DAYS	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	400.0	450.0
0.0	1.0000	.9955	.9910	.9866	.9822	.9778	.9734	.9691	.9648	.9604
500.0	.9561	.9519	.9476	.9434	.9392	.9350	.9308	.9266	.9225	.9184
1000.0	.9143	.9102	.9061	.9021	.8980	.8940	.8900	.8860	.8821	.8781
1500.0	.8742	.8703	.8664	.8626	.8587	.8549	.8510	.8472	.8434	.8397
2000.0	.8359	.8322	.8285	.8248	.8211	.8174	.8138	.8101	.8065	.8029
2500.0	.7993	.7957	.7922	.7886	.7851	.7816	.7781	.7746	.7712	.7677
3000.0	.7643	.7609	.7575	.7541	.7507	.7474	.7440	.7407	.7374	.7341
3500.0	.7308	.7276	.7243	.7211	.7178	.7146	.7114	.7083	.7051	.7019
4000.0	.6988	.6957	.6926	.6895	.6864	.6833	.6803	.6772	.6742	.6712
4500.0	.6682	.6652	.6622	.6593	.6563	.6534	.6505	.6476	.6447	.6418
5000.0	.6389	.6361	.6332	.6304	.6276	.6248	.6220	.6192	.6164	.6137
5500.0	.6109	.6082	.6055	.6028	.6001	.5974	.5947	.5921	.5894	.5868
6000.0	.5842	.5816	.5790	.5764	.5738	.5712	.5687	.5661	.5636	.5611
6500.0	.5586	.5561	.5536	.5511	.5487	.5462	.5438	.5413	.5389	.5365
7000.0	.5341	.5317	.5294	.5270	.5246	.5223	.5200	.5176	.5153	.5130
7500.0	.5107	.5084	.5062	.5039	.5017	.4994	.4972	.4950	.4927	.4905
8000.0	.4884	.4862	.4840	.4818	.4797	.4775	.4754	.4733	.4712	.4691
8500.0	.4670	.4649	.4628	.4607	.4587	.4566	.4546	.4525	.4505	.4485
9000.0	.4465	.4445	.4425	.4405	.4386	.4366	.4347	.4327	.4308	.4289
9500.0	.4269	.4250	.4231	.4212	.4194	.4175	.4156	.4138	.4119	.4101
10000.0	.4082	.4064	.4046	.4028	.4010	.3992	.3974	.3956	.3939	.3921
10500.0	.3904	.3886	.3869	.3851	.3834	.3817	.3800	.3783	.3766	.3749
11000.0	.3733	.3716	.3699	.3683	.3666	.3650	.3634	.3617	.3601	.3585
11500.0	.3569	.3553	.3537	.3521	.3506	.3490	.3474	.3459	.3443	.3428
12000.0	.3413	.3397	.3382	.3367	.3352	.3337	.3322	.3307	.3293	.3278
12500.0	.3263	.3249	.3234	.3220	.3205	.3191	.3177	.3163	.3148	.3134
13000.0	.3120	.3106	.3092	.3079	.3065	.3051	.3038	.3024	.3010	.2997
13500.0	.2984	.2970	.2957	.2944	.2931	.2918	.2904	.2891	.2879	.2866
14000.0	.2853	.2840	.2827	.2815	.2802	.2790	.2777	.2765	.2752	.2740
14500.0	.2728	.2716	.2704	.2691	.2679	.2667	.2656	.2644	.2632	.2620
15000.0	.2608	.2597	.2585	.2574	.2562	.2551	.2539	.2528	.2517	.2505
15500.0	.2494	.2483	.2472	.2461	.2450	.2439	.2428	.2417	.2406	.2396
16000.0	.2385	.2374	.2364	.2353	.2343	.2332	.2322	.2311	.2301	.2291
16500.0	.2280	.2270	.2260	.2250	.2240	.2230	.2220	.2210	.2200	.2190
17000.0	.2180	.2171	.2161	.2151	.2142	.2132	.2123	.2113	.2104	.2094
17500.0	.2085	.2076	.2066	.2057	.2048	.2039	.2030	.2021	.2012	.2003
18000.0	.1994	.1985	.1976	.1967	.1958	.1949	.1941	.1932	.1923	.1915
18500.0	.1906	.1898	.1889	.1881	.1872	.1864	.1856	.1847	.1839	.1831
19000.0	.1823	.1815	.1806	.1798	.1790	.1782	.1774	.1766	.1759	.1751
19500.0	.1743	.1735	.1727	.1720	.1712	.1704	.1697	.1689	.1682	.1674

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HALF-LIFE 21.20 YEARS CALCULATION INTERVAL 50.0 DAYS

DAYS	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	400.0	450.0
20000.0	.1667	.1659	.1652	.1644	.1637	.1630	.16.2	.1615	.1608	.1601
20500.0	.1594	.1586	.1579	.1572	.1565	.1558	.1551	.1544	.1537	.1531
21000.0	.1524	.1517	.1510	.1503	.1497	.1490	.1483	.1477	.1470	.1463
21500.0	.1457	.1450	.1444	.1437	.1431	.1425	.1418	.1412	.1406	.1399
22000.0	.1393	.1387	.1381	.1375	.1368	.1362	.1356	.1350	.1344	.1338
22500.0	.1332	.1326	.1320	.1314	.1308	.1303	.1297	.1291	.1285	.1279
23000.0	.1274	.1268	.1262	.1257	.1251	.1245	.1240	.1234	.1229	.1223
23500.0	.1218	.1212	.1207	.1202	.1196	.1191	.1186	.1180	.1175	.1170
24000.0	.1165	.1159	.1154	.1149	.1144	.1139	.1134	.1129	.1124	.1118
24500.0	.1113	.1109	.1104	.1099	.1094	.1089	.1084	.1079	.1074	.1069
25000.0	.1065	.1060	.1055	.1050	.1046	.1041	.1036	.1032	.1027	.1023
25500.0	.1018	.1013	.1009	.1004	.1000	.0995	.0991	.0987	.0982	.0978

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HALF-LIFE 6.13 HOURS CALCULATION INTERVAL 5.0 MINUTES

HOURS	MINUTES 0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0
0.00	1.0000	.9906	.9813	.9721	.9630	.9539	.9450	.9361	.9273	.9186	.9100	.9015
1.00	.8930	.8847	.8764	.8681	.8600	.8519	.8439	.8360	.8282	.8204	.8127	.8051
2.00	.7975	.7901	.7827	.7753	.7680	.7608	.7537	.7466	.7396	.7327	.7258	.7190
3.00	.7123	.7056	.6990	.6924	.6859	.6795	.6731	.6668	.6606	.6544	.6482	.6421
4.00	.6361	.6301	.6242	.6184	.6126	.6068	.6011	.5955	.5899	.5844	.5789	.5735
5.00	.5681	.5628	.5575	.5523	.5471	.5420	.5369	.5318	.5268	.5219	.5170	.5122
6.00	.5074	.5026	.4979	.4932	.4886	.4840	.4795	.4750	.4705	.4661	.4617	.4574
7.00	.4531	.4489	.4446	.4405	.4363	.4322	.4282	.4242	.4202	.4163	.4124	.4085
8.00	.4047	.4009	.3971	.3934	.3897	.3860	.3824	.3788	.3753	.3717	.3683	.3648
9.00	.3614	.3580	.3546	.3513	.3480	.3448	.3415	.3383	.3351	.3320	.3289	.3258
10.00	.3227	.3197	.3167	.3137	.3108	.3079	.3050	.3021	.2993	.2965	.2937	.2910
11.00	.2882	.2855	.2828	.2802	.2776	.2750	.2724	.2698	.2673	.2648	.2623	.2598
12.00	.2574	.2550	.2526	.2502	.2479	.2456	.2433	.2410	.2387	.2365	.2343	.2321
13.00	.2299	.2277	.2256	.2235	.2214	.2193	.2172	.2152	.2132	.2112	.2092	.2072
14.00	.2053	.2034	.2015	.1996	.1977	.1958	.1940	.1922	.1904	.1886	.1868	.1851
15.00	.1833	.1816	.1799	.1782	.1766	.1749	.1733	.1716	.1700	.1684	.1669	.1653
16.00	.1637	.1622	.1607	.1592	.1577	.1562	.1547	.1533	.1518	.1504	.1490	.1476
17.00	.1462	.1449	.1435	.1421	.1408	.1395	.1382	.1369	.1356	.1343	.1331	.1318
18.00	.1306	.1294	.1281	.1269	.1258	.1246	.1234	.1222	.1211	.1200	.1188	.1177
19.00	.1166	.1155	.1144	.1134	.1123	.1112	.1102	.1092	.1081	.1071	.1061	.1051
20.00	.1041	.1032	.1022	.1012	.1003	.0994	.0984	.0975	.0966	.0957	.0948	.0939

AM - 241

HALF-LIFE 458.00 YEARS CALCULATION INTERVAL 5.0 YEARS

YEARS	YEARS 0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0
0.0	1.0000	.9924	.9849	.9775	.9701	.9628	.9556	.9484	.9412	.9341
50.0	.9271	.9201	.9131	.9063	.8994	.8926	.8859	.8792	.8726	.8660
100.0	.8595	.8530	.8466	.8402	.8339	.8276	.8214	.8152	.8090	.8029
150.0	.7969	.7909	.7849	.7790	.7731	.7673	.7615	.7557	.7500	.7444
200.0	.7388	.7332	.7277	.7222	.7168	.7114	.7060	.7007	.6954	.6901
250.0	.6849	.6798	.6746	.6696	.6645	.6595	.6545	.6496	.6447	.6398
300.0	.6350	.6302	.6255	.6208	.6161	.6114	.6068	.6023	.5977	.5932
350.0	.5887	.5843	.5799	.5755	.5712	.5669	.5626	.5584	.5541	.5500
400.0	.5458	.5417	.5376	.5336	.5295	.5256	.5216	.5177	.5138	.5099
450.0	.5060	.5022	.4984	.4947	.4910	.4873	.4836	.4799	.4763	.4727
500.0	.4692	.4656	.4621	.4586	.4552	.4517	.4483	.4450	.4416	.4383
550.0	.4350	.4317	.4284	.4252	.4220	.4188	.4157	.4125	.4094	.4063
600.0	.4033	.4002	.3972	.3942	.3912	.3883	.3854	.3825	.3796	.3767
650.0	.3739	.3710	.3682	.3655	.3627	.3600	.3573	.3546	.3519	.3492
700.0	.3466	.3440	.3414	.3388	.3363	.3337	.3312	.3287	.3263	.3238
750.0	.3214	.3189	.3165	.3141	.3118	.3094	.3071	.3048	.3025	.3002
800.0	.2979	.2957	.2935	.2912	.2890	.2869	.2847	.2826	.2804	.2783
850.0	.2762	.2741	.2721	.2700	.2680	.2660	.2639	.2620	.2600	.2580
900.0	.2561	.2541	.2522	.2503	.2484	.2466	.2447	.2429	.2410	.2392
950.0	.2374	.2356	.2338	.2321	.2303	.2286	.2269	.2252	.2235	.2218
1000.0	.2201	.2184	.2168	.2152	.2135	.2119	.2103	.2087	.2072	.2056
1050.0	.2041	.2025	.2010	.1995	.1980	.1965	.1950	.1935	.1921	.1906
1100.0	.1892	.1878	.1863	.1849	.1835	.1822	.1808	.1794	.1781	.1767
1150.0	.1754	.1741	.1728	.1715	.1702	.1689	.1676	.1663	.1651	.1638
1200.0	.1626	.1614	.1602	.1590	.1578	.1566	.1554	.1542	.1531	.1519
1250.0	.1508	.1496	.1485	.1474	.1463	.1452	.1441	.1430	.1419	.1408
1300.0	.1398	.1387	.1377	.1366	.1356	.1346	.1336	.1326	.1316	.1306
1350.0	.1296	.1286	.1276	.1267	.1257	.1248	.1238	.1229	.1220	.1210
1400.0	.1201	.1192	.1183	.1174	.1165	.1157	.1148	.1139	.1131	.1122
1450.0	.1114	.1105	.1097	.1089	.1080	.1072	.1064	.1055	.1048	.1040
1500.0	.1032	.1025	.1017	.1009	.1002	.0994	.0987	.0979	.0972	.0964

SR - 124

HALF-LIFE 60.00 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
0.00	1.0000	.9961	.9923	.9885	.9847	.9809	.9771	.9734	.9696	.9659	.9622	.9585
4.00	.9548	.9511	.9475	.9438	.9402	.9366	.9330	.9294	.9258	.9223	.9187	.9152
8.00	.9117	.9082	.9047	.9012	.8977	.8943	.8908	.8874	.8840	.8806	.8772	.8739
12.00	.8705	.8672	.8638	.8605	.8572	.8539	.8506	.8473	.8441	.8408	.8376	.8344
16.00	.8312	.8280	.8248	.8216	.8185	.8153	.8122	.8091	.8060	.8029	.7998	.7967
20.00	.7937	.7906	.7876	.7845	.7815	.7785	.7755	.7725	.7696	.7666	.7637	.7607
24.00	.7578	.7549	.7520	.7491	.7462	.7434	.7405	.7377	.7348	.7320	.7292	.7264
28.00	.7236	.7208	.7180	.7153	.7125	.7098	.7071	.7043	.7016	.6989	.6962	.6936
32.00	.6909	.6883	.6856	.6830	.6803	.6777	.6751	.6725	.6699	.6674	.6648	.6622
36.00	.6597	.6572	.6546	.6521	.6496	.6471	.6446	.6422	.6397	.6372	.6348	.6323
40.00	.6299	.6275	.6251	.6227	.6203	.6179	.6155	.6132	.6108	.6085	.6061	.6038
44.00	.6015	.5992	.5968	.5946	.5923	.5900	.5877	.5855	.5832	.5810	.5787	.5765
48.00	.5743	.5721	.5699	.5677	.5655	.5633	.5612	.5590	.5569	.5547	.5526	.5505
52.00	.5484	.5463	.5442	.5421	.5400	.5379	.5358	.5338	.5317	.5297	.5276	.5256
56.00	.5236	.5216	.5196	.5176	.5156	.5136	.5116	.5097	.5077	.5058	.5038	.5019
60.00	.5000	.4980	.4961	.4942	.4923	.4904	.4885	.4867	.4848	.4829	.4811	.4792
64.00	.4774	.4755	.4737	.4719	.4701	.4683	.4665	.4647	.4629	.4611	.4593	.4576
68.00	.4558	.4541	.4523	.4506	.4488	.4471	.4454	.4437	.4420	.4403	.4386	.4369
72.00	.4352	.4336	.4319	.4302	.4286	.4269	.4253	.4236	.4220	.4204	.4188	.4172
76.00	.4156	.4140	.4124	.4108	.4092	.4076	.4061	.4045	.4030	.4014	.3999	.3983
80.00	.3968	.3953	.3938	.3922	.3907	.3892	.3877	.3862	.3848	.3833	.3818	.3803
84.00	.3789	.3774	.3760	.3745	.3731	.3717	.3702	.3688	.3674	.3660	.3646	.3632
88.00	.3618	.3604	.3590	.3576	.3562	.3549	.3535	.3521	.3508	.3494	.3481	.3468
92.00	.3454	.3441	.3428	.3415	.3401	.3388	.3375	.3362	.3349	.3337	.3324	.3311
96.00	.3298	.3286	.3273	.3260	.3248	.3235	.3223	.3211	.3198	.3186	.3174	.3161
100.00	.3149	.3137	.3125	.3113	.3101	.3089	.3077	.3066	.3054	.3042	.3030	.3019
104.00	.3007	.2996	.2984	.2973	.2961	.2950	.2938	.2927	.2916	.2905	.2893	.2882
108.00	.2871	.2860	.2849	.2838	.2827	.2816	.2806	.2795	.2784	.2773	.2763	.2752
112.00	.2742	.2731	.2721	.2710	.2700	.2689	.2679	.2669	.2658	.2648	.2638	.2628
116.00	.2618	.2608	.2598	.2588	.2578	.2568	.2558	.2548	.2538	.2529	.2519	.2509
120.00	.2500	.2490	.2480	.2471	.2461	.2452	.2442	.2433	.2424	.2414	.2405	.2396
124.00	.2387	.2377	.2368	.2359	.2350	.2341	.2332	.2323	.2314	.2305	.2296	.2288
128.00	.2279	.2270	.2261	.2253	.2244	.2235	.2227	.2218	.2210	.2201	.2193	.2184
132.00	.2176	.2168	.2159	.2151	.2143	.2134	.2126	.2118	.2110	.2102	.2094	.2086
136.00	.2078	.2070	.2062	.2054	.2046	.2038	.2030	.2022	.2015	.2007	.1999	.1991
140.00	.1984	.1976	.1969	.1961	.1953	.1946	.1938	.1931	.1924	.1916	.1909	.1901
144.00	.1894	.1887	.1880	.1872	.1865	.1858	.1851	.1844	.1837	.1830	.1823	.1816
148.00	.1809	.1802	.1795	.1788	.1781	.1774	.1767	.1760	.1754	.1747	.1740	.1734
152.00	.1727	.1720	.1714	.1707	.1700	.1694	.1687	.1681	.1674	.1668	.1662	.1655
156.00	.1649	.1643	.1636	.1630	.1624	.1617	.1611	.1605	.1599	.1593	.1587	.1580

SR - 124

HALF-LIFE 60.00 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
160.00	.1574	.1568	.1562	.1556	.1550	.1544	.1538	.1533	.1527	.1521	.1515	.1509
164.00	.1503	.1498	.1492	.1486	.1480	.1475	.1469	.1463	.1458	.1452	.1446	.1441
168.00	.1435	.1430	.1424	.1419	.1413	.1408	.1403	.1397	.1392	.1386	.1381	.1376
172.00	.1371	.1365	.1360	.1355	.1350	.1344	.1339	.1334	.1329	.1324	.1319	.1314
176.00	.1309	.1304	.1299	.1294	.1289	.1284	.1279	.1274	.1269	.1264	.1259	.1254
180.00	.1250	.1245	.1240	.1235	.1230	.1226	.1221	.1216	.1212	.1207	.1202	.1198
184.00	.1193	.1188	.1184	.1179	.1175	.1170	.1166	.1161	.1157	.1152	.1148	.1144
188.00	.1139	.1135	.1130	.1126	.1122	.1117	.1113	.1109	.1105	.1100	.1096	.1092
192.00	.1088	.1084	.1079	.1075	.1071	.1067	.1063	.1059	.1055	.1051	.1047	.1043
196.00	.1039	.1035	.1031	.1027	.1023	.1019	.1015	.1011	.1007	.1003	.0999	.0995

SB - 125

HALF-LIFE 2.70 YEARS CALCULATION INTERVAL 5.0 DAYS

DAYS	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0
0.0	1.0000	.9964	.9929	.9895	.9860	.9825	.9791	.9756	.9722	.9688
50.0	.9654	.9620	.9586	.9553	.9519	.9486	.9452	.9419	.9386	.9353
100.0	.9320	.9288	.9255	.9222	.9190	.9158	.9126	.9094	.9062	.9030
150.0	.8998	.8967	.8935	.8904	.8873	.8841	.8810	.8779	.8749	.8718
200.0	.8687	.8657	.8626	.8596	.8566	.8536	.8506	.8476	.8446	.8417
250.0	.8387	.8358	.8328	.8299	.8270	.8241	.8212	.8183	.8154	.8126
300.0	.8097	.8069	.8040	.8012	.7984	.7956	.7928	.7900	.7873	.7845
350.0	.7817	.7790	.7763	.7735	.7708	.7681	.7654	.7627	.7601	.7574
400.0	.7547	.7521	.7494	.7468	.7442	.7416	.7390	.7364	.7338	.7312
450.0	.7286	.7261	.7235	.7210	.7185	.7159	.7134	.7109	.7084	.7059
500.0	.7035	.7010	.6985	.6961	.6936	.6912	.6888	.6864	.6839	.6815
550.0	.6791	.6768	.6744	.6720	.6697	.6673	.6650	.6626	.6603	.6580
600.0	.6557	.6534	.6511	.6488	.6465	.6443	.6420	.6397	.6375	.6353
650.0	.6330	.6308	.6286	.6264	.6242	.6220	.6198	.6176	.6155	.6133
700.0	.6111	.6090	.6069	.6047	.6026	.6005	.5984	.5963	.5942	.5921
750.0	.5900	.5880	.5859	.5838	.5818	.5797	.5777	.5757	.5737	.5716
800.0	.5696	.5676	.5656	.5637	.5617	.5597	.5577	.5558	.5538	.5519
850.0	.5499	.5480	.5461	.5442	.5423	.5404	.5385	.5366	.5347	.5328
900.0	.5309	.5291	.5272	.5254	.5235	.5217	.5199	.5180	.5162	.5144
950.0	.5126	.5108	.5090	.5072	.5054	.5037	.5019	.5001	.4984	.4966
1000.0	.4949	.4931	.4914	.4897	.4880	.4863	.4845	.4828	.4811	.4795
1050.0	.4778	.4761	.4744	.4728	.4711	.4694	.4678	.4662	.4645	.4629
1100.0	.4613	.4596	.4580	.4564	.4548	.4532	.4516	.4500	.4485	.4469
1150.0	.4453	.4438	.4422	.4406	.4391	.4376	.4360	.4345	.4330	.4314
1200.0	.4299	.4284	.4269	.4254	.4239	.4224	.4210	.4195	.4180	.4165
1250.0	.4151	.4136	.4122	.4107	.4093	.4078	.4064	.4050	.4036	.4021
1300.0	.4007	.3993	.3979	.3965	.3951	.3937	.3924	.3910	.3896	.3882
1350.0	.3869	.3855	.3842	.3828	.3815	.3801	.3788	.3775	.3761	.3748
1400.0	.3735	.3722	.3709	.3696	.3683	.3670	.3657	.3644	.3631	.3619
1450.0	.3606	.3593	.3581	.3568	.3556	.3543	.3531	.3518	.3506	.3494
1500.0	.3481	.3469	.3457	.3445	.3433	.3421	.3409	.3397	.3385	.3373
1550.0	.3361	.3349	.3337	.3326	.3314	.3302	.3291	.3279	.3268	.3256
1600.0	.3245	.3233	.3222	.3211	.3200	.3188	.3177	.3166	.3155	.3144
1650.0	.3133	.3122	.3111	.3100	.3089	.3078	.3067	.3057	.3046	.3035
1700.0	.3024	.3014	.3003	.2993	.2982	.2972	.2961	.2951	.2941	.2930
1750.0	.2920	.2910	.2899	.2889	.2879	.2869	.2859	.2849	.2839	.2829
1800.0	.2819	.2809	.2799	.2789	.2780	.2770	.2760	.2750	.2741	.2731
1850.0	.2722	.2712	.2703	.2693	.2684	.2674	.2665	.2655	.2646	.2637
1900.0	.2628	.2618	.2609	.2600	.2591	.2582	.2573	.2564	.2555	.2546
1950.0	.2537	.2528	.2519	.2510	.2501	.2492	.2484	.2475	.2466	.2458

SR - '25

HALF-LIFE 2.70 YEARS CALCULATION INTERVAL 5.0 DAYS

DAYS	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0
2000.0	.2449	.2440	.2432	.2423	.2415	.2406	.2398	.2389	.2381	.2373
2050.0	.2364	.2356	.2348	.2340	.2331	.2323	.2315	.2307	.2299	.2291
2100.0	.2283	.2275	.2267	.2259	.2251	.2243	.2235	.2227	.2219	.2212
2150.0	.2204	.2196	.2188	.2181	.2173	.2165	.2158	.2150	.2143	.2135
2200.0	.2128	.2120	.2113	.2105	.2098	.2091	.2083	.2076	.2069	.2061
2250.0	.2054	.2047	.2040	.2032	.2025	.2018	.2011	.2004	.1997	.1990
2300.0	.1983	.1976	.1969	.1962	.1955	.1948	.1942	.1935	.1928	.1921
2350.0	.1915	.1908	.1901	.1894	.1888	.1881	.1875	.1868	.1861	.1855
2400.0	.1848	.1842	.1835	.1829	.1823	.1816	.1810	.1803	.1797	.1791
2450.0	.1784	.1778	.1772	.1766	.1760	.1753	.1747	.1741	.1735	.1729
2500.0	.1723	.1717	.1711	.1705	.1699	.1693	.1687	.1681	.1675	.1669
2550.0	.1663	.1657	.1652	.1646	.1640	.1634	.1628	.1623	.1617	.1611
2600.0	.1606	.1600	.1594	.1589	.1583	.1578	.1572	.1567	.1561	.1556
2650.0	.1550	.1545	.1539	.1534	.1529	.1523	.1518	.1513	.1507	.1502
2700.0	.1497	.1491	.1486	.1481	.1476	.1471	.1465	.1460	.1455	.1450
2750.0	.1445	.1440	.1435	.1430	.1425	.1420	.1415	.1410	.1405	.1400
2800.0	.1395	.1390	.1385	.1380	.1375	.1371	.1366	.1361	.1356	.1351
2850.0	.1347	.1342	.1337	.1333	.1328	.1323	.1319	.1314	.1309	.1305
2900.0	.1300	.1296	.1291	.1287	.1282	.1278	.1273	.1269	.1264	.1260
2950.0	.1255	.1251	.1246	.1242	.1238	.1233	.1229	.1225	.1220	.1216
3000.0	.1212	.1208	.1203	.1199	.1195	.1191	.1187	.1182	.1178	.1174
3050.0	.1170	.1166	.1162	.1158	.1154	.1150	.1146	.1141	.1137	.1133
3100.0	.1130	.1126	.1122	.1118	.1114	.1110	.1106	.1102	.1098	.1094
3150.0	.1090	.1087	.1083	.1079	.1075	.1071	.1068	.1064	.1060	.1056
3200.0	.1053	.1049	.1045	.1042	.1038	.1034	.1031	.1027	.1024	.1020
3250.0	.1016	.1013	.1009	.1006	.1002	.0999	.0995	.0992	.0988	.0985

A - 41

HALF-LIFE 1.83 HOURS CALCULATION INTERVAL 1.0 MINUTES

HOURS	MINUTES 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9937	.9874	.9812	.9750	.9689	.9628	.9567	.9507	.9447	.9388	.9329
.20	.9270	.9212	.9154	.9096	.9039	.8982	.8925	.8869	.8813	.8758	.8703	.8648
.40	.8594	.8540	.8486	.8432	.8379	.8327	.8274	.8222	.8170	.8119	.8068	.8017
.60	.7967	.7916	.7867	.7817	.7768	.7719	.7670	.7622	.7574	.7527	.7479	.7432
.80	.7385	.7339	.7293	.7247	.7201	.7156	.7111	.7066	.7022	.6977	.6934	.6890
1.00	.6847	.6803	.6761	.6718	.6676	.6634	.6592	.6551	.6509	.6468	.6428	.6387
1.20	.6347	.6307	.6267	.6228	.6189	.6150	.6111	.6073	.6034	.5996	.5959	.5921
1.40	.5884	.5847	.5810	.5774	.5737	.5701	.5665	.5630	.5594	.5559	.5524	.5489
1.60	.5455	.5420	.5386	.5352	.5319	.5285	.5252	.5219	.5186	.5153	.5121	.5089
1.80	.5057	.5025	.4993	.4962	.4931	.4900	.4869	.4838	.4808	.4777	.4747	.4717
2.00	.4688	.4658	.4629	.4600	.4571	.4542	.4513	.4485	.4457	.4429	.4401	.4373
2.20	.4346	.4318	.4291	.4264	.4237	.4211	.4184	.4158	.4132	.4106	.4080	.4054
2.40	.4029	.4003	.3978	.3953	.3928	.3903	.3879	.3854	.3830	.3806	.3782	.3758
2.60	.3735	.3711	.3688	.3665	.3642	.3619	.3596	.3573	.3551	.3528	.3506	.3484
2.80	.3462	.3440	.3419	.3397	.3376	.3355	.3333	.3312	.3292	.3271	.3250	.3230
3.00	.3210	.3189	.3169	.3149	.3129	.3110	.3090	.3071	.3051	.3032	.3013	.2994
3.20	.2975	.2957	.2938	.2920	.2901	.2883	.2865	.2847	.2829	.2811	.2793	.2776
3.40	.2758	.2741	.2724	.2706	.2689	.2673	.2656	.2639	.2622	.2606	.2589	.2573
3.60	.2557	.2541	.2525	.2509	.2493	.2478	.2462	.2446	.2431	.2416	.2401	.2385
3.80	.2370	.2355	.2341	.2326	.2311	.2297	.2282	.2268	.2254	.2239	.2225	.2211
4.00	.2197	.2184	.2170	.2156	.2143	.2129	.2116	.2102	.2089	.2076	.2063	.2050
4.20	.2037	.2024	.2012	.1999	.1986	.1974	.1961	.1949	.1937	.1925	.1912	.1900
4.40	.1888	.1877	.1865	.1853	.1841	.1830	.1818	.1807	.1795	.1784	.1773	.1762
4.60	.1751	.1740	.1729	.1718	.1707	.1696	.1686	.1675	.1664	.1654	.1643	.1633
4.80	.1623	.1613	.1602	.1592	.1582	.1572	.1563	.1553	.1543	.1533	.1524	.1514
5.00	.1504	.1495	.1486	.1476	.1467	.1458	.1448	.1439	.1430	.1421	.1412	.1403
5.20	.1395	.1386	.1377	.1368	.1360	.1351	.1343	.1334	.1326	.1318	.1309	.1301
5.40	.1293	.1285	.1277	.1269	.1261	.1253	.1245	.1237	.1229	.1221	.1214	.1206
5.60	.1198	.1191	.1183	.1176	.1169	.1161	.1154	.1147	.1139	.1132	.1125	.1118
5.80	.1111	.1104	.1097	.1090	.1083	.1076	.1070	.1063	.1056	.1050	.1043	.1036
6.00	.1030	.1023	.1017	.1011	.1004	.0998	.0992	.0985	.0979	.0973	.0967	.0961

AS - 74

HALF-LIFE 18.70 DAYS CALCULATION INTERVAL 2.0 HOURS

DAYS	HOURS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
0.00	1.0000	.9969	.9938	.9907	.9877	.9846	.9816	.9786	.9755	.9725	.9695	.9665
1.00	.9636	.9606	.9576	.9547	.9517	.9488	.9459	.9430	.9400	.9371	.9343	.9314
2.00	.9285	.9256	.9228	.9199	.9171	.9143	.9114	.9086	.9058	.9030	.9003	.8975
3.00	.8947	.8920	.8892	.8865	.8837	.8810	.8783	.8756	.8729	.8702	.8675	.8648
4.00	.8622	.8595	.8568	.8542	.8516	.8489	.8463	.8437	.8411	.8385	.8359	.8333
5.00	.8308	.8282	.8257	.8231	.8206	.8180	.8155	.8130	.8105	.8080	.8055	.8030
6.00	.8005	.7981	.7956	.7932	.7907	.7883	.7858	.7834	.7810	.7786	.7762	.7738
7.00	.7714	.7690	.7667	.7643	.7619	.7596	.7572	.7549	.7526	.7503	.7479	.7456
8.00	.7433	.7410	.7388	.7365	.7342	.7319	.7297	.7274	.7252	.7230	.7207	.7185
9.00	.7163	.7141	.7119	.7097	.7075	.7053	.7031	.7010	.6988	.6967	.6945	.6924
10.00	.6902	.6881	.6860	.6839	.6817	.6796	.6775	.6755	.6734	.6713	.6692	.6672
11.00	.6651	.6631	.6610	.6590	.6569	.6549	.6529	.6509	.6489	.6469	.6449	.6429
12.00	.6409	.6389	.6370	.6350	.6330	.6311	.6291	.6272	.6253	.6233	.6214	.6195
13.00	.6176	.6157	.6138	.6119	.6100	.6081	.6062	.6044	.6025	.6006	.5988	.5969
14.00	.5951	.5933	.5914	.5896	.5878	.5860	.5842	.5824	.5806	.5788	.5770	.5752
15.00	.5734	.5717	.5699	.5682	.5664	.5647	.5629	.5612	.5595	.5577	.5560	.5543
16.00	.5526	.5509	.5492	.5475	.5458	.5441	.5424	.5408	.5391	.5374	.5358	.5341
17.00	.5325	.5308	.5292	.5276	.5259	.5243	.5227	.5211	.5195	.5179	.5163	.5147
18.00	.5131	.5115	.5099	.5084	.5068	.5052	.5037	.5021	.5006	.4990	.4975	.4960
19.00	.4944	.4929	.4914	.4899	.4883	.4868	.4853	.4838	.4824	.4809	.4794	.4779
20.00	.4764	.4750	.4735	.4720	.4706	.4691	.4677	.4662	.4648	.4634	.4619	.4605
21.00	.4591	.4577	.4563	.4549	.4535	.4521	.4507	.4493	.4479	.4465	.4451	.4438
22.00	.4424	.4410	.4397	.4383	.4370	.4356	.4343	.4329	.4316	.4303	.4289	.4276
23.00	.4263	.4250	.4237	.4224	.4210	.4198	.4185	.4172	.4159	.4146	.4133	.4120
24.00	.4108	.4095	.4082	.4070	.4057	.4045	.4032	.4020	.4007	.3995	.3983	.3970
25.00	.3958	.3946	.3934	.3922	.3910	.3898	.3886	.3874	.3862	.3850	.3838	.3826
26.00	.3814	.3802	.3791	.3779	.3767	.3756	.3744	.3733	.3721	.3710	.3698	.3687
27.00	.3675	.3664	.3653	.3641	.3630	.3619	.3608	.3597	.3586	.3575	.3564	.3553
28.00	.3542	.3531	.3520	.3509	.3498	.3487	.3477	.3466	.3455	.3444	.3434	.3423
29.00	.3413	.3402	.3392	.3381	.3371	.3360	.3350	.3340	.3329	.3319	.3309	.3299
30.00	.3289	.3278	.3268	.3258	.3248	.3238	.3228	.3218	.3208	.3198	.3188	.3179
31.00	.3169	.3159	.3149	.3140	.3130	.3120	.3111	.3101	.3091	.3082	.3072	.3063
32.00	.3054	.3044	.3035	.3025	.3016	.3007	.2997	.2988	.2979	.2970	.2961	.2951
33.00	.2942	.2933	.2924	.2915	.2906	.2897	.2888	.2879	.2871	.2862	.2853	.2844
34.00	.2835	.2827	.2818	.2809	.2800	.2792	.2783	.2775	.2766	.2758	.2749	.2741
35.00	.2732	.2724	.2715	.2707	.2699	.2690	.2682	.2674	.2665	.2657	.2649	.2641
36.00	.2633	.2625	.2616	.2608	.2600	.2592	.2584	.2576	.2568	.2560	.2553	.2545
37.00	.2537	.2529	.2521	.2513	.2506	.2498	.2490	.2483	.2475	.2467	.2460	.2452
38.00	.2445	.2437	.2429	.2422	.2415	.2407	.2400	.2392	.2385	.2377	.2370	.2363
39.00	.2356	.2348	.2341	.2334	.2327	.2319	.2312	.2305	.2298	.2291	.2284	.2277

AS - 74

HALF-LIFE 18.70 DAYS CALCULATION INTERVAL 2.0 HOURS

DAYS	HOURS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
40.00	.2270	.2263	.2256	.2249	.2242	.2235	.2228	.2221	.2214	.2208	.2201	.2194
41.00	.2187	.2180	.2174	.2167	.2160	.2154	.2147	.2140	.2134	.2127	.2121	.2114
42.00	.2108	.2101	.2095	.2088	.2082	.2075	.2069	.2063	.2056	.2050	.2043	.2037
43.00	.2031	.2025	.2018	.2012	.2006	.2000	.1994	.1987	.1981	.1975	.1969	.1963
44.00	.1957	.1951	.1945	.1939	.1933	.1927	.1921	.1915	.1909	.1903	.1897	.1892
45.00	.1886	.1880	.1874	.1868	.1863	.1857	.1851	.1845	.1840	.1834	.1828	.1823
46.00	.1817	.1812	.1806	.1800	.1795	.1789	.1784	.1778	.1773	.1767	.1762	.1756
47.00	.1751	.1746	.1740	.1735	.1729	.1724	.1719	.1714	.1708	.1703	.1698	.1692
48.00	.1687	.1682	.1677	.1672	.1667	.1661	.1656	.1651	.1646	.1641	.1636	.1631
49.00	.1626	.1621	.1616	.1611	.1606	.1601	.1596	.1591	.1586	.1581	.1576	.1571
50.00	.1567	.1562	.1557	.1552	.1547	.1543	.1538	.1533	.1528	.1524	.1519	.1514
51.00	.1510	.1505	.1500	.1496	.1491	.1486	.1482	.1477	.1473	.1468	.1464	.1459
52.00	.1455	.1450	.1446	.1441	.1437	.1432	.1428	.1424	.1419	.1415	.1410	.1406
53.00	.1402	.1397	.1393	.1389	.1385	.1380	.1376	.1372	.1367	.1363	.1359	.1355
54.00	.1351	.1347	.1342	.1338	.1334	.1330	.1326	.1322	.1318	.1314	.1310	.1306
55.00	.1302	.1298	.1294	.1290	.1286	.1282	.1278	.1274	.1270	.1266	.1262	.1258
56.00	.1254	.1250	.1246	.1243	.1239	.1235	.1231	.1227	.1224	.1220	.1216	.1212
57.00	.1208	.1205	.1201	.1197	.1194	.1190	.1186	.1183	.1179	.1175	.1172	.1168
58.00	.1165	.1161	.1157	.1154	.1150	.1147	.1143	.1140	.1136	.1133	.1129	.1126
59.00	.1122	.1119	.1115	.1112	.1108	.1105	.1101	.1098	.1095	.1091	.1088	.1085
60.00	.1081	.1078	.1075	.1071	.1068	.1065	.1061	.1058	.1055	.1052	.1048	.1045
61.00	.1042	.1039	.1035	.1032	.1029	.1026	.1023	.1020	.1016	.1013	.1010	.1007
62.00	.1004	.1001	.0998	.0995	.0992	.0989	.0986	.0982	.0979	.0976	.0973	.0970

AS - 76

HALF-LIFE 26.80 HOURS CALCULATION INTERVAL 10.0 MINUTES

HOURS	MINUTES 0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0
0.00	1.0000	.9956	.9914	.9871	.9829	.9786	.9744	.9702	.9661	.9619	.9578	.9536
2.00	.9495	.9455	.9414	.9373	.9333	.9293	.9253	.9213	.9173	.9134	.9095	.9056
4.00	.9017	.8978	.8939	.8901	.8863	.8824	.8786	.8749	.8711	.8674	.8636	.8599
6.00	.8562	.8525	.8489	.8452	.8416	.8380	.8343	.8308	.8272	.8236	.8201	.8166
8.00	.8130	.8095	.8061	.8026	.7991	.7957	.7923	.7889	.7855	.7821	.7787	.7754
10.00	.7721	.7687	.7654	.7621	.7589	.7556	.7523	.7491	.7459	.7427	.7395	.7363
12.00	.7331	.7300	.7268	.7237	.7206	.7175	.7144	.7113	.7083	.7052	.7022	.6992
14.00	.6962	.6932	.6902	.6872	.6843	.6813	.6784	.6755	.6726	.6697	.6668	.6639
16.00	.6611	.6582	.6554	.6526	.6498	.6470	.6442	.6414	.6387	.6359	.6332	.6305
18.00	.6277	.6250	.6224	.6197	.6170	.6144	.6117	.6091	.6065	.6039	.6013	.5987
20.00	.5961	.5935	.5910	.5884	.5859	.5834	.5809	.5784	.5759	.5734	.5709	.5685
22.00	.5660	.5636	.5612	.5588	.5564	.5540	.5516	.5492	.5469	.5445	.5422	.5398
24.00	.5375	.5352	.5329	.5306	.5283	.5260	.5238	.5215	.5193	.5170	.5148	.5126
26.00	.5104	.5082	.5060	.5038	.5017	.4995	.4974	.4952	.4931	.4910	.4889	.4868
28.00	.4847	.4826	.4805	.4784	.4764	.4743	.4723	.4703	.4682	.4662	.4642	.4622
30.00	.4602	.4583	.4563	.4543	.4524	.4504	.4485	.4466	.4446	.4427	.4408	.4389
32.00	.4370	.4352	.4333	.4314	.4296	.4277	.4259	.4240	.4222	.4204	.4186	.4168
34.00	.4150	.4132	.4114	.4097	.4079	.4061	.4044	.4027	.4009	.3992	.3975	.3958
36.00	.3941	.3924	.3907	.3890	.3873	.3857	.3840	.3824	.3807	.3791	.3774	.3758
38.00	.3742	.3726	.3710	.3694	.3678	.3662	.3646	.3631	.3615	.3600	.3584	.3569
40.00	.3553	.3538	.3523	.3508	.3493	.3478	.3463	.3448	.3433	.3418	.3403	.3389
42.00	.3374	.3360	.3345	.3331	.3317	.3302	.3288	.3274	.3260	.3246	.3232	.3218
44.00	.3204	.3190	.3177	.3163	.3149	.3136	.3122	.3109	.3095	.3082	.3069	.3056
46.00	.3043	.3029	.3016	.3003	.2991	.2978	.2965	.2952	.2939	.2927	.2914	.2902
48.00	.2889	.2877	.2864	.2852	.2840	.2828	.2815	.2803	.2791	.2779	.2767	.2755
50.00	.2743	.2732	.2720	.2708	.2697	.2685	.2673	.2662	.2650	.2639	.2628	.2616
52.00	.2605	.2594	.2583	.2572	.2561	.2550	.2539	.2528	.2517	.2506	.2495	.2484
54.00	.2474	.2463	.2453	.2442	.2431	.2421	.2411	.2400	.2390	.2380	.2369	.2359
56.00	.2349	.2339	.2329	.2319	.2309	.2299	.2289	.2279	.2269	.2260	.2250	.2240
58.00	.2231	.2221	.2211	.2202	.2192	.2183	.2174	.2164	.2155	.2146	.2136	.2127
60.00	.2118	.2109	.2100	.2091	.2082	.2073	.2064	.2055	.2046	.2038	.2029	.2020
62.00	.2011	.2003	.1994	.1985	.1977	.1968	.1960	.1952	.1943	.1935	.1926	.1918
64.00	.1910	.1902	.1894	.1885	.1877	.1869	.1861	.1853	.1845	.1837	.1829	.1821
66.00	.1814	.1806	.1798	.1790	.1783	.1775	.1767	.1760	.1752	.1745	.1737	.1730
68.00	.1722	.1715	.1707	.1700	.1693	.1685	.1678	.1671	.1664	.1657	.1649	.1642
70.00	.1635	.1628	.1621	.1614	.1607	.1600	.1594	.1587	.1580	.1573	.1566	.1560
72.00	.1553	.1546	.1540	.1533	.1526	.1520	.1513	.1507	.1500	.1494	.1487	.1481
74.00	.1475	.1468	.1462	.1456	.1449	.1443	.1437	.1431	.1425	.1418	.1412	.1406
76.00	.1400	.1394	.1388	.1382	.1376	.1370	.1364	.1359	.1353	.1347	.1341	.1335
78.00	.1330	.1324	.1318	.1312	.1307	.1301	.1296	.1290	.1284	.1279	.1273	.1268
80.00	.1263	.1257	.1252	.1246	.1241	.1236	.1230	.1225	.1220	.1214	.1209	.1204
82.00	.1199	.1194	.1189	.1183	.1178	.1173	.1168	.1163	.1158	.1153	.1148	.1143
84.00	.1138	.1133	.1129	.1124	.1119	.1114	.1109	.1105	.1100	.1095	.1090	.1086
86.00	.1081	.1076	.1072	.1067	.1062	.1058	.1053	.1049	.1044	.1040	.1035	.1031
88.00	.1026	.1022	.1018	.1013	.1009	.1005	.1000	.0996	.0992	.0987	.0983	.0979

BA - 133

HALF-LIFE 7.50 YEARS CALCULATION INTERVAL 15.0 DAYS

DAYS	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
0.0	1.0000	.9962	.9924	.9886	.9849	.9811	.9774	.9737	.9700	.9663
150.0	.9627	.9590	.9554	.9518	.9482	.9446	.9410	.9374	.9339	.9303
300.0	.9268	.9233	.9198	.9163	.9128	.9094	.9059	.9025	.8991	.8957
450.0	.8923	.8889	.8855	.8822	.8788	.8755	.8722	.8688	.8656	.8623
600.0	.8590	.8557	.8525	.8493	.8461	.8428	.8396	.8365	.8333	.8301
750.0	.8270	.8239	.8207	.8176	.8145	.8114	.8084	.8053	.8022	.7992
900.0	.7962	.7931	.7901	.7871	.7842	.7812	.7782	.7753	.7723	.7694
1050.0	.7665	.7636	.7607	.7578	.7549	.7521	.7492	.7464	.7436	.7407
1200.0	.7379	.7351	.7323	.7296	.7268	.7240	.7213	.7186	.7158	.7131
1350.0	.7104	.7077	.7050	.7024	.6997	.6971	.6944	.6918	.6892	.6865
1500.0	.6839	.6814	.6788	.6762	.6736	.6711	.6685	.6660	.6635	.6610
1650.0	.6585	.6560	.6535	.6510	.6485	.6461	.6436	.6412	.6387	.6363
1800.0	.6339	.6315	.6291	.6267	.6244	.6220	.6196	.6173	.6149	.6126
1950.0	.6103	.6080	.6057	.6034	.6011	.5988	.5965	.5943	.5920	.5898
2100.0	.5875	.5853	.5831	.5809	.5787	.5765	.5743	.5721	.5700	.5678
2250.0	.5656	.5635	.5614	.5592	.5571	.5550	.5529	.5508	.5487	.5466
2400.0	.5446	.5425	.5404	.5384	.5363	.5343	.5323	.5303	.5283	.5263
2550.0	.5243	.5223	.5203	.5183	.5164	.5144	.5124	.5105	.5086	.5066
2700.0	.5047	.5028	.5009	.4990	.4971	.4952	.4933	.4915	.4896	.4878
2850.0	.4859	.4841	.4822	.4804	.4786	.4768	.4750	.4732	.4714	.4696
3000.0	.4678	.4660	.4643	.4625	.4607	.4590	.4573	.4555	.4538	.4521
3150.0	.4504	.4487	.4470	.4453	.4436	.4419	.4402	.4385	.4369	.4352
3300.0	.4336	.4319	.4303	.4287	.4270	.4254	.4238	.4222	.4206	.4190
3450.0	.4174	.4158	.4143	.4127	.4111	.4096	.4080	.4065	.4049	.4034
3600.0	.4019	.4003	.3988	.3973	.3958	.3943	.3928	.3913	.3898	.3884
3750.0	.3869	.3854	.3840	.3825	.3810	.3796	.3782	.3767	.3753	.3739
3900.0	.3725	.3710	.3696	.3682	.3668	.3655	.3641	.3627	.3613	.3599
4050.0	.3586	.3572	.3559	.3545	.3532	.3518	.3505	.3492	.3478	.3465
4200.0	.3452	.3439	.3426	.3413	.3400	.3387	.3374	.3362	.3349	.3336
4350.0	.3323	.3311	.3298	.3286	.3273	.3261	.3249	.3236	.3224	.3212
4500.0	.3200	.3187	.3175	.3163	.3151	.3139	.3127	.3116	.3104	.3092
4650.0	.3080	.3069	.3057	.3045	.3034	.3022	.3011	.2999	.2988	.2977
4800.0	.2965	.2954	.2943	.2932	.2921	.2910	.2899	.2888	.2877	.2866
4950.0	.2855	.2844	.2833	.2823	.2812	.2801	.2791	.2780	.2770	.2759
5100.0	.2749	.2738	.2728	.2717	.2707	.2697	.2687	.2676	.2666	.2656
5250.0	.2646	.2636	.2626	.2616	.2606	.2596	.2586	.2577	.2567	.2557
5400.0	.2547	.2538	.2528	.2519	.2509	.2500	.2490	.2481	.2471	.2462
5550.0	.2453	.2443	.2434	.2425	.2416	.2406	.2397	.2388	.2379	.2370
5700.0	.2361	.2352	.2343	.2334	.2325	.2317	.2308	.2299	.2290	.2282
5850.0	.2273	.2264	.2256	.2247	.2239	.2230	.2222	.2213	.2205	.2197

BA - 133

HALF-LIFE = 7.50 YEARS CALCULATION INTERVAL 15.0 DAYS

DAYS	DAYS 0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
6000.0	.2188	.2180	.2172	.2164	.2155	.2147	.2139	.2131	.2123	.2115
6150.0	.2107	.2099	.2091	.2083	.2075	.2067	.2059	.2051	.2044	.2036
6300.0	.2028	.2021	.2013	.2005	.1998	.1990	.1983	.1975	.1968	.1960
6450.0	.1953	.1945	.1938	.1931	.1923	.1916	.1909	.1901	.1894	.1887
6600.0	.1880	.1873	.1866	.1859	.1851	.1844	.1837	.1831	.1824	.1817
6750.0	.1810	.1803	.1796	.1789	.1782	.1776	.1769	.1762	.1756	.1749
6900.0	.1742	.1736	.1729	.1723	.1716	.1710	.1703	.1697	.1690	.1684
7050.0	.1677	.1671	.1665	.1658	.1652	.1646	.1640	.1633	.1627	.1621
7200.0	.1615	.1609	.1603	.1597	.1590	.1584	.1578	.1572	.1566	.1561
7350.0	.1555	.1549	.1543	.1537	.1531	.1525	.1520	.1514	.1508	.1502
7500.0	.1497	.1491	.1485	.1480	.1474	.1469	.1463	.1457	.1452	.1446
7650.0	.1441	.1435	.1430	.1425	.1419	.1414	.1408	.1403	.1398	.1392
7800.0	.1387	.1382	.1377	.1371	.1366	.1361	.1356	.1351	.1346	.1341
7950.0	.1335	.1330	.1325	.1320	.1315	.1310	.1305	.1300	.1295	.1291
8100.0	.1286	.1281	.1276	.1271	.1266	.1261	.1257	.1252	.1247	.1242
8250.0	.1238	.1233	.1228	.1224	.1219	.1214	.1210	.1205	.1201	.1196
8400.0	.1192	.1187	.1183	.1178	.1174	.1169	.1165	.1160	.1156	.1152
8550.0	.1147	.1143	.1138	.1134	.1130	.1126	.1121	.1117	.1113	.1109
8700.0	.1104	.1100	.1096	.1092	.1088	.1084	.1079	.1075	.1071	.1067
8850.0	.1063	.1059	.1055	.1051	.1047	.1043	.1039	.1035	.1031	.1027
9000.0	.1024	.1020	.1016	.1012	.1008	.1004	.1000	.0997	.0993	.0989

BA - 133

HALF-LIFE 7.50 YEARS CALCULATION INTERVAL .5 MONTHS

YEARS	MONTHS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
0.00	1.0000	.9961	.9923	.9885	.9847	.9809	.9771	.9734	.9696	.9659	.9622	.9585
.50	.9548	.9511	.9475	.9438	.9402	.9366	.9330	.9294	.9258	.9223	.9187	.9152
1.00	.9117	.9082	.9047	.9012	.8977	.8943	.8908	.8874	.8840	.8806	.8772	.8739
1.50	.8705	.8672	.8638	.8605	.8572	.8539	.8506	.8473	.8441	.8408	.8376	.8344
2.00	.8312	.8280	.8248	.8216	.8185	.8153	.8122	.8091	.8060	.8029	.7998	.7967
2.50	.7937	.7906	.7876	.7845	.7815	.7785	.7755	.7725	.7696	.7666	.7637	.7607
3.00	.7578	.7549	.7520	.7491	.7462	.7434	.7405	.7377	.7348	.7320	.7292	.7264
3.50	.7236	.7208	.7180	.7153	.7125	.7098	.7071	.7043	.7016	.6989	.6962	.6936
4.00	.6909	.6883	.6856	.6830	.6803	.6777	.6751	.6725	.6699	.6674	.6648	.6622
4.50	.6597	.6572	.6546	.6521	.6496	.6471	.6446	.6422	.6397	.6372	.6348	.6323
5.00	.6299	.6275	.6251	.6227	.6203	.6179	.6155	.6132	.6108	.6085	.6061	.6038
5.50	.6015	.5992	.5968	.5946	.5923	.5900	.5877	.5855	.5832	.5810	.5787	.5765
6.00	.5743	.5721	.5699	.5677	.5655	.5633	.5612	.5590	.5569	.5547	.5526	.5505
6.50	.5484	.5463	.5442	.5421	.5400	.5379	.5358	.5338	.5317	.5297	.5276	.5256
7.00	.5236	.5216	.5196	.5176	.5156	.5136	.5116	.5097	.5077	.5058	.5038	.5019
7.50	.5000	.4980	.4961	.4942	.4923	.4904	.4885	.4867	.4848	.4829	.4811	.4792
8.00	.4774	.4755	.4737	.4719	.4701	.4683	.4665	.4647	.4629	.4611	.4593	.4576
8.50	.4558	.4541	.4523	.4506	.4488	.4471	.4454	.4437	.4420	.4403	.4386	.4369
9.00	.4352	.4336	.4319	.4302	.4286	.4269	.4253	.4236	.4220	.4204	.4188	.4172
9.50	.4156	.4140	.4124	.4108	.4092	.4076	.4061	.4045	.4030	.4014	.3999	.3983
10.00	.3968	.3953	.3938	.3922	.3907	.3892	.3877	.3862	.3848	.3833	.3818	.3803
10.50	.3789	.3774	.3760	.3745	.3731	.3717	.3702	.3688	.3674	.3660	.3646	.3632
11.00	.3618	.3604	.3590	.3576	.3562	.3549	.3535	.3521	.3508	.3494	.3481	.3468
11.50	.3454	.3441	.3428	.3415	.3401	.3388	.3375	.3362	.3349	.3337	.3324	.3311
12.00	.3298	.3286	.3273	.3260	.3248	.3235	.3223	.3211	.3198	.3186	.3174	.3161
12.50	.3149	.3137	.3125	.3113	.3101	.3089	.3077	.3066	.3054	.3042	.3030	.3019
13.00	.3007	.2996	.2984	.2973	.2961	.2950	.2938	.2927	.2916	.2905	.2893	.2882
13.50	.2871	.2860	.2849	.2838	.2827	.2817	.2806	.2795	.2784	.2773	.2763	.2752
14.00	.2742	.2731	.2721	.2710	.2700	.2689	.2679	.2669	.2658	.2648	.2638	.2628
14.50	.2618	.2608	.2598	.2588	.2578	.2568	.2558	.2548	.2538	.2529	.2519	.2509
15.00	.2500	.2490	.2480	.2471	.2461	.2452	.2442	.2433	.2424	.2414	.2405	.2396
15.50	.2387	.2377	.2368	.2359	.2350	.2341	.2332	.2323	.2314	.2305	.2296	.2288
16.00	.2279	.2270	.2261	.2253	.2244	.2235	.2227	.2218	.2210	.2201	.2193	.2184
16.50	.2176	.2168	.2159	.2151	.2143	.2134	.2126	.2118	.2110	.2102	.2094	.2086
17.00	.2078	.2070	.2062	.2054	.2046	.2038	.2030	.2022	.2015	.2007	.1999	.1991
17.50	.1984	.1976	.1969	.1961	.1953	.1946	.1938	.1931	.1924	.1916	.1909	.1901
18.00	.1894	.1887	.1880	.1872	.1865	.1858	.1851	.1844	.1837	.1830	.1823	.1816
18.50	.1809	.1802	.1795	.1788	.1781	.1774	.1767	.1760	.1754	.1747	.1740	.1734
19.00	.1727	.1720	.1714	.1707	.1701	.1694	.1687	.1681	.1675	.1668	.1662	.1655
19.50	.1649	.1643	.1636	.1630	.1624	.1617	.1611	.1605	.1599	.1593	.1587	.1581

BA - 133

HALF-LIFE 7.50 YEARS CALCULATION INTERVAL .5 MONTHS

YEARS	MONTHS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
20.00	.1574	.1568	.1562	.1556	.1550	.1544	.1538	.1533	.1527	.1521	.1515	.1509
20.50	.1503	.1498	.1492	.1486	.1480	.1475	.1469	.1463	.1458	.1452	.1446	.1441
21.00	.1435	.1430	.1424	.1419	.1413	.1408	.1403	.1397	.1392	.1386	.1381	.1376
21.50	.1371	.1365	.1360	.1355	.1350	.1344	.1339	.1334	.1329	.1324	.1319	.1314
22.00	.1309	.1304	.1299	.1294	.1289	.1284	.1279	.1274	.1269	.1264	.1259	.1254
22.50	.1250	.1245	.1240	.1235	.1230	.1226	.1221	.1216	.1212	.1207	.1202	.1198
23.00	.1193	.1188	.1184	.1179	.1175	.1170	.1166	.1161	.1157	.1152	.1148	.1144
23.50	.1139	.1135	.1130	.1126	.1122	.1117	.1113	.1109	.1105	.1100	.1096	.1092
24.00	.1088	.1084	.1079	.1075	.1071	.1067	.1063	.1059	.1055	.1051	.1047	.1043
24.50	.1039	.1035	.1031	.1027	.1023	.1019	.1015	.1011	.1007	.1003	.0999	.0995

767 - 771 O - 65 - 3

BA - 140

HALF-LIFE 12.80 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9977	.9954	.9932	.9910	.9887	.9865	.9843	.9821	.9798	.9776	.9754
.50	.9732	.9710	.9689	.9667	.9645	.9623	.9601	.9580	.9558	.9537	.9515	.9494
1.00	.9472	.9451	.9430	.9408	.9387	.9366	.9345	.9324	.9303	.9282	.9261	.9240
1.50	.9219	.9199	.9178	.9157	.9136	.9116	.9095	.9075	.9054	.9034	.9014	.8993
2.00	.8973	.8953	.8933	.8913	.8892	.8872	.8852	.8832	.8813	.8793	.8773	.8753
2.50	.8733	.8714	.8694	.8674	.8655	.8635	.8616	.8596	.8577	.8558	.8538	.8519
3.00	.8500	.8481	.8462	.8443	.8424	.8405	.8386	.8367	.8348	.8329	.8310	.8292
3.50	.8273	.8254	.8236	.8217	.8199	.8180	.8162	.8143	.8125	.8107	.8088	.8070
4.00	.8052	.8034	.8016	.7998	.7980	.7962	.7944	.7926	.7908	.7890	.7872	.7855
4.50	.7837	.7819	.7802	.7784	.7766	.7749	.7731	.7714	.7697	.7679	.7662	.7645
5.00	.7627	.7610	.7593	.7576	.7559	.7542	.7525	.7508	.7491	.7474	.7457	.7440
5.50	.7424	.7407	.7390	.7374	.7357	.7340	.7324	.7307	.7291	.7274	.7258	.7242
6.00	.7225	.7209	.7193	.7177	.7160	.7144	.7128	.7112	.7096	.7080	.7064	.7048
6.50	.7032	.7017	.7001	.6985	.6969	.6953	.6938	.6922	.6907	.6891	.6875	.6860
7.00	.6845	.6829	.6814	.6798	.6783	.6768	.6752	.6737	.6722	.6707	.6692	.6677
7.50	.6662	.6647	.6632	.6617	.6602	.6587	.6572	.6557	.6542	.6528	.6513	.6498
8.00	.6484	.6469	.6455	.6440	.6425	.6411	.6397	.6382	.6368	.6353	.6339	.6325
8.50	.6310	.6296	.6282	.6268	.6254	.6240	.6226	.6212	.6198	.6184	.6170	.6156
9.00	.6142	.6128	.6114	.6100	.6087	.6073	.6059	.6046	.6032	.6018	.6005	.5991
9.50	.5978	.5964	.5951	.5937	.5924	.5911	.5897	.5884	.5871	.5858	.5844	.5831
10.00	.5818	.5805	.5792	.5779	.5766	.5753	.5740	.5727	.5714	.5701	.5688	.5675
10.50	.5663	.5650	.5637	.5624	.5612	.5599	.5587	.5574	.5561	.5549	.5536	.5524
11.00	.5511	.5499	.5487	.5474	.5462	.5450	.5437	.5425	.5413	.5401	.5388	.5376
11.50	.5364	.5352	.5340	.5328	.5316	.5304	.5292	.5280	.5268	.5256	.5244	.5233
12.00	.5221	.5209	.5197	.5186	.5174	.5162	.5151	.5139	.5127	.5116	.5104	.5093
12.50	.5081	.5070	.5059	.5047	.5036	.5024	.5013	.5002	.4990	.4979	.4968	.4957
13.00	.4946	.4935	.4923	.4912	.4901	.4890	.4879	.4868	.4857	.4846	.4835	.4824
13.50	.4814	.4803	.4792	.4781	.4770	.4760	.4749	.4738	.4727	.4717	.4706	.4696
14.00	.4685	.4674	.4664	.4653	.4643	.4632	.4622	.4612	.4601	.4591	.4580	.4570
14.50	.4560	.4550	.4539	.4529	.4519	.4509	.4498	.4488	.4478	.4468	.4458	.4448
15.00	.4438	.4428	.4418	.4408	.4398	.4388	.4378	.4368	.4359	.4349	.4339	.4329
15.50	.4319	.4310	.4300	.4290	.4281	.4271	.4261	.4252	.4242	.4233	.4223	.4214
16.00	.4204	.4195	.4185	.4176	.4166	.4157	.4147	.4138	.4129	.4119	.4110	.4101
16.50	.4092	.4082	.4073	.4064	.4055	.4046	.4037	.4028	.4018	.4009	.4000	.3991
17.00	.3982	.3973	.3964	.3956	.3947	.3938	.3929	.3920	.3911	.3902	.3894	.3885
17.50	.3876	.3867	.3859	.3850	.3841	.3833	.3824	.3815	.3807	.3798	.3790	.3781
18.00	.3772	.3764	.3755	.3747	.3739	.3730	.3722	.3713	.3705	.3697	.3688	.3680
18.50	.3672	.3663	.3655	.3647	.3639	.3630	.3622	.3614	.3606	.3598	.3590	.3582
19.00	.3574	.3566	.3557	.3549	.3541	.3533	.3526	.3518	.3510	.3502	.3494	.3486
19.50	.3478	.3470	.3462	.3455	.3447	.3439	.3431	.3424	.3416	.3408	.3400	.3393

BA - 140

HALF-LIFE 12.80 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
20.00	.3385	.3378	.3370	.3362	.3355	.3347	.3340	.3332	.3325	.3317	.3310	.3302
20.50	.3295	.3287	.3280	.3273	.3265	.3258	.3250	.3243	.3236	.3228	.3221	.3214
21.00	.3207	.3199	.3192	.3185	.3178	.3171	.3164	.3156	.3149	.3142	.3135	.3128
21.50	.3121	.3114	.3107	.3100	.3093	.3086	.3079	.3072	.3065	.3058	.3051	.3045
22.00	.3038	.3031	.3024	.3017	.3010	.3004	.2997	.2990	.2983	.2977	.2970	.2963
22.50	.2956	.2950	.2943	.2937	.2930	.2923	.2917	.2910	.2904	.2897	.2891	.2884
23.00	.2878	.2871	.2865	.2858	.2852	.2845	.2839	.2832	.2826	.2820	.2813	.2807
23.50	.2801	.2794	.2788	.2782	.2775	.2769	.2763	.2757	.2751	.2744	.2738	.2732
24.00	.2726	.2720	.2714	.2707	.2701	.2695	.2689	.2683	.2677	.2671	.2665	.2659
24.50	.2653	.2647	.2641	.2635	.2629	.2623	.2617	.2611	.2606	.2600	.2594	.2588
25.00	.2582	.2576	.2570	.2565	.2559	.2553	.2547	.2542	.2536	.2530	.2524	.2519
25.50	.2513	.2507	.2502	.2496	.2491	.2485	.2479	.2474	.2468	.2463	.2457	.2451
26.00	.2446	.2440	.2435	.2429	.2424	.2419	.2413	.2408	.2402	.2397	.2391	.2386
26.50	.2381	.2375	.2370	.2365	.2359	.2354	.2349	.2343	.2338	.2333	.2327	.2322
27.00	.2317	.2312	.2307	.2301	.2296	.2291	.2286	.2281	.2276	.2270	.2265	.2260
27.50	.2255	.2250	.2245	.2240	.2235	.2230	.2225	.2220	.2215	.2210	.2205	.2200
28.00	.2195	.2190	.2185	.2180	.2175	.2170	.2165	.2160	.2156	.2151	.2146	.2141
28.50	.2136	.2131	.2127	.2122	.2117	.2112	.2107	.2103	.2098	.2093	.2089	.2084
29.00	.2079	.2074	.2070	.2065	.2060	.2056	.2051	.2047	.2042	.2037	.2033	.2028
29.50	.2024	.2019	.2014	.2010	.2005	.2001	.1996	.1992	.1987	.1983	.1978	.1974
30.00	.1970	.1965	.1961	.1956	.1952	.1947	.1943	.1939	.1934	.1930	.1926	.1921
30.50	.1917	.1913	.1908	.1904	.1900	.1895	.1891	.1887	.1883	.1878	.1874	.1870
31.00	.1866	.1861	.1857	.1853	.1849	.1845	.1841	.1836	.1832	.1828	.1824	.1820
31.50	.1816	.1812	.1808	.1804	.1800	.1795	.1791	.1787	.1783	.1779	.1775	.1771
32.00	.1767	.1763	.1759	.1755	.1751	.1747	.1744	.1740	.1736	.1732	.1728	.1724
32.50	.1720	.1716	.1712	.1708	.1705	.1701	.1697	.1693	.1689	.1685	.1682	.1678
33.00	.1674	.1670	.1667	.1663	.1659	.1655	.1652	.1648	.1644	.1640	.1637	.1633
33.50	.1629	.1626	.1622	.1618	.1615	.1611	.1607	.1604	.1600	.1597	.1593	.1589
34.00	.1586	.1582	.1579	.1575	.1572	.1568	.1565	.1561	.1557	.1554	.1550	.1547
34.50	.1543	.1540	.1537	.1533	.1530	.1526	.1523	.1519	.1516	.1512	.1509	.1506
35.00	.1502	.1499	.1495	.1492	.1489	.1485	.1482	.1479	.1475	.1472	.1469	.1465
35.50	.1462	.1459	.1456	.1452	.1449	.1446	.1442	.1439	.1436	.1433	.1429	.1426
36.00	.1423	.1420	.1417	.1413	.1410	.1407	.1404	.1401	.1398	.1394	.1391	.1388
36.50	.1385	.1382	.1379	.1376	.1373	.1369	.1366	.1363	.1360	.1357	.1354	.1351
37.00	.1348	.1345	.1342	.1339	.1336	.1333	.1330	.1327	.1324	.1321	.1318	.1315
37.50	.1312	.1309	.1306	.1303	.1300	.1297	.1294	.1291	.1288	.1286	.1283	.1280
38.00	.1277	.1274	.1271	.1268	.1265	.1263	.1260	.1257	.1254	.1251	.1248	.1246
38.50	.1243	.1240	.1237	.1234	.1232	.1229	.1226	.1223	.1221	.1218	.1215	.1212
39.00	.1210	.1207	.1204	.1201	.1199	.1196	.1193	.1191	.1188	.1185	.1183	.1180
39.50	.1177	.1175	.1172	.1169	.1167	.1164	.1161	.1159	.1156	.1154	.1151	.1148

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HALF-LIFE 12.80 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
40.00	.1146	.1143	.1141	.1138	.1135	.1133	.1130	.1128	.1125	.1123	.1120	.1118
40.50	.1115	.1113	.1110	.1108	.1105	.1103	.1100	.1098	.1095	.1093	.1090	.1088
41.00	.1085	.1083	.1080	.1078	.1076	.1073	.1071	.1068	.1066	.1064	.1061	.1059
41.50	.1056	.1054	.1052	.1049	.1047	.1045	.1042	.1040	.1037	.1035	.1033	.1030
42.00	.1028	.1026	.1023	.1021	.1019	.1017	.1014	.1012	.1010	.1007	.1005	.1003
42.50	.1001	.0998	.0996	.0994	.0992	.0989	.0987	.0985	.0983	.0981	.0978	.0976
43.00	.0974	.0972	.0970	.0967	.0965	.0963	.0961	.0959	.0956	.0954	.0952	.0950
43.50	.0948	.0946	.0944	.0941	.0939	.0937	.0935	.0933	.0931	.0929	.0927	.0925
44.00	.0923	.0920	.0918	.0916	.0914	.0912	.0910	.0908	.0906	.0904	.0902	.0900
44.50	.0898	.0896	.0894	.0892	.0890	.0888	.0886	.0884	.0882	.0880	.0878	.0876
45.00	.0874	.0872	.0870	.0868	.0866	.0864	.0862	.0860	.0858	.0856	.0854	.0852
45.50	.0851	.0849	.0847	.0845	.0843	.0841	.0839	.0837	.0835	.0833	.0832	.0830
46.00	.0828	.0826	.0824	.0822	.0820	.0819	.0817	.0815	.0813	.0811	.0809	.0807
46.50	.0806	.0804	.0802	.0800	.0798	.0797	.0795	.0793	.0791	.0789	.0788	.0786
47.00	.0784	.0782	.0781	.0779	.0777	.0775	.0774	.0772	.0770	.0768	.0767	.0765
47.50	.0763	.0761	.0760	.0758	.0756	.0755	.0753	.0751	.0750	.0748	.0746	.0744
48.00	.0743	.0741	.0739	.0738	.0736	.0734	.0733	.0731	.0729	.0728	.0726	.0725
48.50	.0723	.0721	.0720	.0718	.0716	.0715	.0713	.0712	.0710	.0708	.0707	.0705
49.00	.0704	.0702	.0700	.0699	.0697	.0696	.0694	.0693	.0691	.0689	.0688	.0686
49.50	.0685	.0683	.0682	.0680	.0679	.0677	.0676	.0674	.0673	.0671	.0670	.0668
50.00	.0666	.0665	.0663	.0662	.0660	.0659	.0658	.0656	.0655	.0653	.0652	.0650
50.50	.0649	.0647	.0646	.0644	.0643	.0641	.0640	.0638	.0637	.0636	.0634	.0633
51.00	.0631	.0630	.0628	.0627	.0626	.0624	.0623	.0621	.0620	.0619	.0617	.0616
51.50	.0614	.0613	.0612	.0610	.0609	.0608	.0606	.0605	.0603	.0602	.0601	.0599
52.00	.0598	.0597	.0595	.0594	.0593	.0591	.0590	.0589	.0587	.0586	.0585	.0583
52.50	.0582	.0581	.0579	.0578	.0577	.0576	.0574	.0573	.0572	.0570	.0569	.0568
53.00	.0566	.0565	.0564	.0563	.0561	.0560	.0559	.0558	.0556	.0555	.0554	.0553
53.50	.0551	.0550	.0549	.0548	.0546	.0545	.0544	.0543	.0541	.0540	.0539	.0538
54.00	.0537	.0535	.0534	.0533	.0532	.0531	.0529	.0528	.0527	.0526	.0525	.0523
54.50	.0522	.0521	.0520	.0519	.0518	.0516	.0515	.0514	.0513	.0512	.0511	.0509
55.00	.0508	.0507	.0506	.0505	.0504	.0503	.0501	.0500	.0499	.0498	.0497	.0496
55.50	.0495	.0494	.0492	.0491	.0490	.0489	.0488	.0487	.0486	.0485	.0484	.0483
56.00	.0481	.0480	.0479	.0478	.0477	.0476	.0475	.0474	.0473	.0472	.0471	.0470
56.50	.0469	.0468	.0466	.0465	.0464	.0463	.0462	.0461	.0460	.0459	.0458	.0457
57.00	.0456	.0455	.0454	.0453	.0452	.0451	.0450	.0449	.0448	.0447	.0446	.0445
57.50	.0444	.0443	.0442	.0441	.0440	.0439	.0438	.0437	.0436	.0435	.0434	.0433
58.00	.0432	.0431	.0430	.0429	.0428	.0427	.0426	.0425	.0424	.0423	.0422	.0421
58.50	.0420	.0419	.0419	.0418	.0417	.0416	.0415	.0414	.0413	.0412	.0411	.0410
59.00	.0409	.0408	.0407	.0406	.0406	.0405	.0404	.0403	.0402	.0401	.0400	.0399
59.50	.0398	.0397	.0396	.0396	.0395	.0394	.0393	.0392	.0391	.0390	.0389	.0388

BA - 140

HALF-LIFE 12.80 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
60.00	.0388	.0387	.0386	.0385	.0384	.0383	.0382	.0382	.0381	.0380	.0379	.0378
60.50	.0377	.0376	.0376	.0375	.0374	.0373	.0372	.0371	.0370	.0370	.0369	.0368
61.00	.0367	.0366	.0365	.0365	.0364	.0363	.0362	.0361	.0361	.0360	.0359	.0358
61.50	.0357	.0357	.0356	.0355	.0354	.0353	.0353	.0352	.0351	.0350	.0349	.0349
62.00	.0348	.0347	.0346	.0345	.0345	.0344	.0343	.0342	.0342	.0341	.0340	.0339
62.50	.0338	.0338	.0337	.0336	.0335	.0335	.0334	.0333	.0332	.0332	.0331	.0330
63.00	.0329	.0329	.0328	.0327	.0326	.0326	.0325	.0324	.0324	.0323	.0322	.0321
63.50	.0321	.0320	.0319	.0318	.0318	.0317	.0316	.0316	.0315	.0314	.0313	.0313
64.00	.0312	.0311	.0311	.0310	.0309	.0309	.0308	.0307	.0306	.0306	.0305	.0304
64.50	.0304	.0303	.0302	.0302	.0301	.0300	.0300	.0299	.0298	.0298	.0297	.0296
65.00	.0296	.0295	.0294	.0294	.0293	.0292	.0292	.0291	.0290	.0290	.0289	.0288
65.50	.0288	.0287	.0286	.0286	.0285	.0284	.0284	.0283	.0282	.0282	.0281	.0281
66.00	.0280	.0279	.0279	.0278	.0277	.0277	.0276	.0276	.0275	.0274	.0274	.0273
66.50	.0272	.0272	.0271	.0271	.0270	.0269	.0269	.0268	.0268	.0267	.0266	.0266
67.00	.0265	.0265	.0264	.0263	.0263	.0263	.0262	.0261	.0260	.0260	.0259	.0259
67.50	.0258	.0257	.0257	.0256	.0256	.0255	.0255	.0254	.0253	.0253	.0252	.0252
68.00	.0251	.0251	.0250	.0249	.0249	.0248	.0248	.0247	.0247	.0246	.0246	.0245
68.50	.0244	.0244	.0243	.0243	.0242	.0242	.0241	.0241	.0240	.0240	.0239	.0238
69.00	.0238	.0237	.0237	.0236	.0236	.0235	.0235	.0234	.0234	.0233	.0233	.0232
69.50	.0232	.0231	.0230	.0230	.0229	.0229	.0228	.0228	.0227	.0227	.0226	.0226
70.00	.0225	.0225	.0224	.0224	.0223	.0223	.0222	.0222	.0221	.0221	.0220	.0220
70.50	.0219	.0219	.0218	.0219	.0217	.0217	.0216	.0215	.0215	.0215	.0214	.0214
71.00	.0213	.0213	.0212	.0212	.0211	.0211	.0211	.0210	.0210	.0209	.0209	.0208
71.50	.0208	.0207	.0207	.0206	.0206	.0205	.0205	.0204	.0204	.0204	.0203	.0203
72.00	.0202	.0202	.0201	.0201	.0200	.0200	.0199	.0199	.0199	.0198	.0198	.0197
72.50	.0197	.0196	.0196	.0195	.0195	.0195	.0194	.0194	.0193	.0193	.0192	.0192
73.00	.0191	.0191	.0191	.0190	.0190	.0189	.0189	.0188	.0188	.0188	.0187	.0187
73.50	.0185	.0186	.0185	.0185	.0185	.0184	.0184	.0183	.0183	.0183	.0182	.0182
74.00	.0181	.0181	.0181	.0180	.0180	.0179	.0179	.0178	.0178	.0178	.0177	.0177
74.50	.0176	.0176	.0176	.0175	.0175	.0174	.0174	.0174	.0173	.0173	.0173	.0172
75.00	.0172	.0171	.0171	.0171	.0170	.0170	.0169	.0169	.0169	.0168	.0168	.0168
75.50	.0167	.0167	.0166	.0166	.0166	.0165	.0165	.0165	.0164	.0164	.0163	.0163
76.00	.0163	.0162	.0162	.0162	.0161	.0161	.0160	.0160	.0160	.0159	.0159	.0159
76.50	.0158	.0158	.0158	.0157	.0157	.0157	.0156	.0156	.0155	.0155	.0155	.0154
77.00	.0154	.0154	.0153	.0153	.0153	.0152	.0152	.0152	.0151	.0151	.0151	.0150
77.50	.0150	.0150	.0149	.0149	.0149	.0148	.0148	.0148	.0147	.0147	.0147	.0146
78.00	.0146	.0146	.0145	.0145	.0145	.0144	.0144	.0144	.0143	.0143	.0143	.0142
78.50	.0142	.0142	.0141	.0141	.0141	.0140	.0140	.0140	.0139	.0139	.0139	.0139
79.00	.0138	.0138	.0138	.0137	.0137	.0137	.0136	.0136	.0136	.0135	.0135	.0135
79.50	.0135	.0134	.0134	.0134	.0133	.0133	.0133	.0132	.0132	.0132	.0131	.0131

BA - 140

HALF-LIFE 12.80 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
80.00	.0131	.0131	.0130	.0130	.0130	.0129	.0129	.0129	.0129	.0128	.0128	.0128
80.50	.0127	.0127	.0127	.0127	.0126	.0126	.0126	.0125	.0125	.0125	.0125	.0124
81.00	.0124	.0124	.0123	.0123	.0123	.0123	.0122	.0122	.0122	.0121	.0121	.0121
81.50	.0121	.0120	.0120	.0120	.0120	.0119	.0119	.0119	.0118	.0118	.0118	.0118
82.00	.0117	.0117	.0117	.0117	.0116	.0116	.0116	.0116	.0115	.0115	.0115	.0115
82.50	.0114	.0114	.0114	.0113	.0113	.0113	.0113	.0112	.0112	.0112	.0112	.0111
83.00	.0111	.0111	.0111	.0110	.0110	.0110	.0110	.0109	.0109	.0109	.0109	.0108
83.50	.0108	.0108	.0108	.0107	.0107	.0107	.0107	.0107	.0106	.0106	.0106	.0106
84.00	.0105	.0105	.0105	.0105	.0104	.0104	.0104	.0104	.0103	.0103	.0103	.0103
84.50	.0102	.0102	.0102	.0102	.0102	.0101	.0101	.0101	.0101	.0100	.0100	.0100
85.00	.0100	.0100	.0099	.0099	.0099	.0099	.0098	.0098	.0098	.0098	.0097	.0097
85.50	.0097	.0097	.0097	.0096	.0096	.0096	.0096	.0096	.0095	.0095	.0095	.0095
86.00	.0094	.0094	.0094	.0094	.0094	.0093	.0093	.0093	.0093	.0093	.0092	.0092
86.50	.0092	.0092	.0091	.0091	.0091	.0091	.0091	.0090	.0090	.0090	.0090	.0090
87.00	.0089	.0089	.0089	.0089	.0089	.0088	.0088	.0088	.0088	.0088	.0087	.0087
87.50	.0087	.0087	.0087	.0086	.0086	.0086	.0086	.0086	.0085	.0085	.0085	.0085
88.00	.0085	.0085	.0084	.0084	.0084	.0084	.0084	.0083	.0083	.0083	.0083	.0083
88.50	.0082	.0082	.0082	.0082	.0082	.0081	.0081	.0081	.0081	.0081	.0081	.0080
89.00	.0080	.0080	.0080	.0080	.0079	.0079	.0079	.0079	.0079	.0079	.0078	.0078
89.50	.0078	.0078	.0078	.0078	.0077	.0077	.0077	.0077	.0077	.0076	.0076	.0076
90.00	.0076	.0076	.0076	.0075	.0075	.0075	.0075	.0075	.0075	.0074	.0074	.0074
90.50	.0074	.0074	.0074	.0073	.0073	.0073	.0073	.0073	.0073	.0072	.0072	.0072
91.00	.0072	.0072	.0072	.0071	.0071	.0071	.0071	.0071	.0071	.0070	.0070	.0070
91.50	.0070	.0070	.0070	.0070	.0069	.0069	.0069	.0069	.0069	.0069	.0068	.0068
92.00	.0068	.0068	.0068	.0068	.0067	.0067	.0067	.0067	.0067	.0067	.0067	.0066
92.50	.0066	.0066	.0066	.0066	.0066	.0066	.0065	.0065	.0065	.0065	.0065	.0065
93.00	.0064	.0064	.0064	.0064	.0064	.0064	.0064	.0063	.0063	.0063	.0063	.0063
93.50	.0063	.0063	.0062	.0062	.0062	.0062	.0062	.0062	.0062	.0061	.0061	.0061
94.00	.0061	.0061	.0061	.0061	.0061	.0060	.0060	.0060	.0060	.0060	.0060	.0060
94.50	.0059	.0059	.0059	.0059	.0059	.0059	.0059	.0058	.0058	.0058	.0058	.0058
95.00	.0058	.0058	.0058	.0057	.0057	.0057	.0057	.0057	.0057	.0057	.0057	.0056
95.50	.0056	.0056	.0056	.0056	.0056	.0056	.0055	.0055	.0055	.0055	.0055	.0055
96.00	.0055	.0055	.0054	.0054	.0054	.0054	.0054	.0054	.0054	.0054	.0054	.0053
96.50	.0053	.0053	.0053	.0053	.0053	.0053	.0053	.0052	.0052	.0052	.0052	.0052
97.00	.0052	.0052	.0052	.0051	.0051	.0051	.0051	.0051	.0051	.0051	.0051	.0051
97.50	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0050	.0049	.0049	.0049
98.00	.0049	.0049	.0049	.0049	.0049	.0049	.0048	.0048	.0048	.0048	.0048	.0048
98.50	.0048	.0048	.0048	.0047	.0047	.0047	.0047	.0047	.0047	.0047	.0047	.0047
99.00	.0046	.0046	.0045	.0046	.0046	.0046	.0046	.0046	.0046	.0046	.0045	.0045
99.50	.0045	.0045	.0045	.0045	.0045	.0045	.0045	.0044	.0044	.0044	.0044	.0044

BA - 140

HALF-LIFE 12.80 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
100.00	.0044	.0044	.0044	.0044	.0044	.0043	.0043	.0043	.0043	.0043	.0043	.0043
100.50	.0043	.0043	.0043	.0043	.0042	.0042	.0042	.0042	.0042	.0042	.0042	.0042
101.00	.0042	.0042	.0041	.0041	.0041	.0041	.0041	.0041	.0041	.0041	.0041	.0041
101.50	.0041	.0040	.0040	.0040	.0040	.0040	.0040	.0040	.0040	.0040	.0040	.0040
102.00	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0039	.0038
102.50	.0038	.0038	.0038	.0038	.0038	.0038	.0038	.0038	.0038	.0038	.0037	.0037
103.00	.0037	.0037	.0037	.0037	.0037	.0037	.0037	.0037	.0037	.0037	.0036	.0036
103.50	.0036	.0036	.0036	.0036	.0036	.0036	.0036	.0036	.0036	.0036	.0035	.0035
104.00	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0035	.0034
104.50	.0034	.0034	.0034	.0034	.0034	.0034	.0034	.0034	.0034	.0034	.0034	.0034
105.00	.0033	.0033	.0033	.0033	.0033	.0033	.0033	.0033	.0033	.0033	.0033	.0033
105.50	.0033	.0032	.0032	.0032	.0032	.0032	.0032	.0032	.0032	.0032	.0032	.0032
106.00	.0032	.0032	.0032	.0031	.0031	.0031	.0031	.0031	.0031	.0031	.0031	.0031
106.50	.0031	.0031	.0031	.0031	.0031	.0030	.0030	.0030	.0030	.0030	.0030	.0030
107.00	.0030	.0030	.0030	.0030	.0030	.0030	.0030	.0029	.0029	.0029	.0029	.0029
107.50	.0029	.0029	.0029	.0029	.0029	.0029	.0029	.0029	.0029	.0029	.0028	.0028
108.00	.0028	.0028	.0028	.0028	.0028	.0028	.0028	.0028	.0028	.0028	.0028	.0028
108.50	.0028	.0028	.0027	.0027	.0027	.0027	.0027	.0027	.0027	.0027	.0027	.0027
109.00	.0027	.0027	.0027	.0027	.0027	.0027	.0026	.0026	.0026	.0026	.0026	.0026
109.50	.0026	.0026	.0026	.0026	.0026	.0026	.0026	.0026	.0026	.0026	.0026	.0025
110.00	.0025	.0025	.0025	.0025	.0025	.0025	.0025	.0025	.0025	.0025	.0025	.0025
110.50	.0025	.0025	.0025	.0025	.0024	.0024	.0024	.0024	.0024	.0024	.0024	.0024
111.00	.0024	.0024	.0024	.0024	.0024	.0024	.0024	.0024	.0024	.0024	.0023	.0023
111.50	.0023	.0023	.0023	.0023	.0023	.0023	.0023	.0023	.0023	.0023	.0023	.0023
112.00	.0023	.0023	.0023	.0023	.0023	.0022	.0022	.0022	.0022	.0022	.0022	.0022
112.50	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022
113.00	.0022	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021
113.50	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0021	.0020	.0020	.0020
114.00	.0020	.0020	.0020	.0020	.0020	.0020	.0020	.0020	.0020	.0020	.0020	.0020
114.50	.0020	.0020	.0020	.0020	.0020	.0020	.0020	.0019	.0019	.0019	.0019	.0019
115.00	.0019	.0019	.0019	.0019	.0019	.0019	.0019	.0019	.0019	.0019	.0019	.0019
115.50	.0019	.0019	.0019	.0019	.0019	.0019	.0018	.0018	.0018	.0018	.0018	.0018
116.00	.0018	.0018	.0018	.0018	.0018	.0018	.0018	.0018	.0018	.0018	.0018	.0018
116.50	.0018	.0018	.0018	.0018	.0018	.0018	.0017	.0017	.0017	.0017	.0017	.0017
117.00	.0017	.0017	.0017	.0017	.0017	.0017	.0017	.0017	.0017	.0017	.0017	.0017
117.50	.0017	.0017	.0017	.0017	.0017	.0017	.0017	.0016	.0016	.0016	.0016	.0016
118.00	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016
118.50	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0016	.0015	.0015
119.00	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015
119.50	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015

BE - 7

HALF-LIFE 53.00 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
0.00	1.0000	.9956	.9913	.9870	.9827	.9784	.9741	.9699	.9657	.9615	.9573	.9531
4.00	.9490	.9449	.9407	.9367	.9326	.9285	.9245	.9205	.9165	.9125	.9085	.9045
8.00	.9006	.8967	.8928	.8889	.8850	.8812	.8774	.8735	.8697	.8660	.8622	.8584
12.00	.8547	.8510	.8473	.8436	.8399	.8363	.8326	.8290	.8254	.8218	.8182	.8147
16.00	.8111	.8076	.8041	.8006	.7971	.7937	.7902	.7868	.7833	.7799	.7765	.7732
20.00	.7698	.7664	.7631	.7598	.7565	.7532	.7499	.7467	.7434	.7402	.7370	.7338
24.00	.7306	.7274	.7242	.7211	.7179	.7148	.7117	.7086	.7055	.7024	.6994	.6963
28.00	.6933	.6903	.6873	.6843	.6813	.6784	.6754	.6725	.6696	.6666	.6637	.6609
32.00	.6580	.6551	.6523	.6494	.6466	.6438	.6410	.6382	.6354	.6327	.6299	.6272
36.00	.6244	.6217	.6190	.6163	.6136	.6110	.6083	.6057	.6030	.6004	.5978	.5952
40.00	.5926	.5900	.5875	.5849	.5824	.5798	.5773	.5748	.5723	.5698	.5673	.5649
44.00	.5624	.5600	.5575	.5551	.5527	.5503	.5479	.5455	.5431	.5408	.5384	.5361
48.00	.5337	.5314	.5291	.5268	.5245	.5222	.5200	.5177	.5154	.5132	.5110	.5087
52.00	.5065	.5043	.5021	.5000	.4978	.4956	.4935	.4913	.4892	.4870	.4849	.4828
56.00	.4807	.4786	.4765	.4745	.4724	.4703	.4683	.4663	.4642	.4622	.4602	.4582
60.00	.4562	.4542	.4522	.4503	.4483	.4464	.4444	.4425	.4406	.4387	.4367	.4348
64.00	.4330	.4311	.4292	.4273	.4255	.4236	.4218	.4199	.4181	.4163	.4145	.4127
68.00	.4109	.4091	.4073	.4055	.4038	.4020	.4003	.3985	.3968	.3951	.3934	.3916
72.00	.3899	.3882	.3866	.3849	.3832	.3815	.3799	.3782	.3766	.3749	.3733	.3717
76.00	.3701	.3685	.3669	.3653	.3637	.3621	.3605	.3589	.3574	.3558	.3543	.3527
80.00	.3512	.3497	.3482	.3466	.3451	.3436	.3421	.3406	.3392	.3377	.3362	.3348
84.00	.3333	.3318	.3304	.3290	.3275	.3261	.3247	.3233	.3219	.3205	.3191	.3177
88.00	.3163	.3149	.3136	.3122	.3108	.3095	.3081	.3068	.3055	.3041	.3028	.3015
92.00	.3002	.2989	.2976	.2963	.2950	.2937	.2924	.2912	.2899	.2886	.2874	.2861
96.00	.2849	.2836	.2824	.2812	.2800	.2787	.2775	.2763	.2751	.2739	.2727	.2715
100.00	.2704	.2692	.2680	.2668	.2657	.2645	.2634	.2622	.2611	.2600	.2588	.2577
104.00	.2566	.2555	.2543	.2532	.2521	.2510	.2500	.2489	.2478	.2467	.2456	.2446
108.00	.2435	.2424	.2414	.2403	.2393	.2382	.2372	.2362	.2351	.2341	.2331	.2321
112.00	.2311	.2301	.2291	.2281	.2271	.2261	.2251	.2241	.2232	.2222	.2212	.2203
116.00	.2193	.2183	.2174	.2165	.2155	.2146	.2136	.2127	.2118	.2109	.2099	.2090
120.00	.2081	.2072	.2063	.2054	.2045	.2036	.2027	.2019	.2010	.2001	.1992	.1984
124.00	.1975	.1967	.1958	.1949	.1941	.1933	.1924	.1916	.1907	.1899	.1891	.1883
128.00	.1874	.1866	.1858	.1850	.1842	.1834	.1826	.1818	.1810	.1802	.1794	.1787
132.00	.1779	.1771	.1763	.1756	.1748	.1741	.1733	.1726	.1718	.1710	.1703	.1696
136.00	.1688	.1681	.1674	.1666	.1659	.1652	.1645	.1637	.1630	.1623	.1616	.1609
140.00	.1602	.1595	.1588	.1581	.1574	.1568	.1561	.1554	.1547	.1540	.1534	.1527
144.00	.1520	.1514	.1507	.1501	.1494	.1488	.1481	.1475	.1468	.1462	.1456	.1449
148.00	.1443	.1437	.1430	.1424	.1418	.1412	.1406	.1400	.1393	.1387	.1381	.1375
152.00	.1369	.1363	.1357	.1352	.1346	.1340	.1334	.1328	.1322	.1317	.1311	.1305
156.00	.1300	.1294	.1288	.1283	.1277	.1271	.1266	.1260	.1255	.1250	.1244	.1239
160.00	.1233	.1228	.1223	.1217	.1212	.1207	.1201	.1196	.1191	.1186	.1181	.1176
164.00	.1170	.1165	.1160	.1155	.1150	.1145	.1140	.1135	.1130	.1125	.1120	.1116
168.00	.1111	.1106	.1101	.1096	.1092	.1087	.1082	.1077	.1073	.1068	.1063	.1059
172.00	.1054	.1049	.1045	.1040	.1036	.1031	.1027	.1022	.1018	.1013	.1009	.1005
176.00	.1000	.0996	.0992	.0987	.0983	.0979	.0974	.0970	.0966	.0962	.0958	.0953

BI - 210

HALF-LIFE 5.00 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9942	.9885	.9828	.9771	.9715	.9659	.9603	.9548	.9493	.9438	.9384
.50	.9330	.9276	.9223	.9170	.9117	.9064	.9012	.8960	.8908	.8857	.8806	.8755
1.00	.8705	.8655	.8605	.8555	.8506	.8457	.8408	.8360	.8312	.8264	.8216	.8169
1.50	.8122	.8075	.8029	.7982	.7937	.7891	.7845	.7800	.7755	.7711	.7666	.7622
2.00	.7578	.7534	.7491	.7448	.7405	.7362	.7320	.7278	.7236	.7194	.7153	.7112
2.50	.7071	.7030	.6989	.6949	.6909	.6869	.6830	.6790	.6751	.6712	.6674	.6635
3.00	.6597	.6559	.6521	.6484	.6446	.6409	.6372	.6336	.6299	.6263	.6227	.6191
3.50	.6155	.6120	.6085	.6049	.6015	.5980	.5946	.5911	.5877	.5843	.5810	.5776
4.00	.5743	.5710	.5677	.5644	.5612	.5579	.5547	.5515	.5484	.5452	.5421	.5389
4.50	.5358	.5328	.5297	.5266	.5236	.5206	.5176	.5146	.5116	.5087	.5058	.5028
5.00	.5000	.4971	.4942	.4914	.4885	.4857	.4829	.4801	.4774	.4746	.4719	.4692
5.50	.4665	.4638	.4611	.4585	.4558	.4532	.4506	.4480	.4454	.4428	.4403	.4377
6.00	.4352	.4327	.4302	.4277	.4253	.4228	.4204	.4180	.4156	.4132	.4108	.4084
6.50	.4061	.4037	.4014	.3991	.3968	.3945	.3922	.3900	.3877	.3855	.3833	.3811
7.00	.3789	.3767	.3745	.3724	.3702	.3681	.3660	.3639	.3618	.3597	.3576	.3556
7.50	.3535	.3515	.3494	.3474	.3454	.3434	.3415	.3395	.3375	.3356	.3337	.3317
8.00	.3298	.3279	.3260	.3242	.3223	.3204	.3186	.3168	.3149	.3131	.3113	.3095
8.50	.3077	.3060	.3042	.3024	.3007	.2990	.2973	.2955	.2938	.2921	.2905	.2888
9.00	.2871	.2855	.2838	.2822	.2806	.2789	.2773	.2757	.2742	.2726	.2710	.2694
9.50	.2679	.2664	.2648	.2633	.2618	.2603	.2588	.2573	.2558	.2543	.2529	.2514
10.00	.2500	.2485	.2471	.2457	.2442	.2428	.2414	.2400	.2387	.2373	.2359	.2346
10.50	.2332	.2319	.2305	.2292	.2279	.2266	.2253	.2240	.2227	.2214	.2201	.2188
11.00	.2176	.2163	.2151	.2138	.2126	.2114	.2102	.2090	.2078	.2066	.2054	.2042
11.50	.2030	.2018	.2007	.1995	.1984	.1972	.1961	.1950	.1938	.1927	.1916	.1905
12.00	.1894	.1883	.1872	.1862	.1851	.1840	.1830	.1819	.1809	.1798	.1788	.1778
12.50	.1767	.1757	.1747	.1737	.1727	.1717	.1707	.1697	.1687	.1678	.1668	.1658
13.00	.1649	.1639	.1630	.1621	.1611	.1602	.1593	.1584	.1574	.1565	.1556	.1547
13.50	.1538	.1530	.1521	.1512	.1503	.1495	.1486	.1477	.1469	.1460	.1452	.1444
14.00	.1435	.1427	.1419	.1411	.1403	.1395	.1386	.1378	.1371	.1363	.1355	.1347
14.50	.1339	.1332	.1324	.1316	.1309	.1301	.1294	.1286	.1279	.1271	.1264	.1257
15.00	.1250	.1242	.1235	.1228	.1221	.1214	.1207	.1200	.1193	.1186	.1179	.1173
15.50	.1166	.1159	.1152	.1146	.1139	.1133	.1126	.1120	.1113	.1107	.1100	.1094
16.00	.1088	.1081	.1075	.1069	.1063	.1057	.1051	.1045	.1039	.1033	.1027	.1021
16.50	.1015	.1009	.1003	.0997	.0992	.0986	.0980	.0975	.0969	.0963	.0958	.0952

BI - 211

HALF-LIFE 2.15 MINUTES CALCULATION INTERVAL 1.0 SECONDS

MINUTES	SECONDS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9946	.9893	.9840	.9787	.9734	.9682	.9630	.9579	.9527	.9476	.9426
.20	.9375	.9325	.9275	.9225	.9176	.9127	.9078	.9029	.8981	.8932	.8885	.8837
.40	.8790	.8743	.8696	.8649	.8603	.8557	.8511	.8465	.8420	.8375	.8330	.8285
.60	.8241	.8197	.8153	.8109	.8065	.8022	.7979	.7937	.7894	.7852	.7810	.7768
.80	.7726	.7685	.7644	.7603	.7562	.7521	.7481	.7441	.7401	.7361	.7322	.7283
1.00	.7244	.7205	.7166	.7128	.7090	.7052	.7014	.6976	.6939	.6902	.6865	.6828
1.20	.6791	.6755	.6719	.6683	.6647	.6611	.6576	.6541	.6506	.6471	.6436	.6401
1.40	.6367	.6333	.6299	.6265	.6232	.6198	.6165	.6132	.6099	.6067	.6034	.6002
1.60	.5970	.5938	.5906	.5874	.5843	.5811	.5780	.5749	.5718	.5688	.5657	.5627
1.80	.5597	.5567	.5537	.5507	.5478	.5448	.5419	.5390	.5361	.5333	.5304	.5276
2.00	.5247	.5219	.5191	.5163	.5136	.5108	.5081	.5054	.5026	.5000	.4973	.4946
2.20	.4920	.4893	.4867	.4841	.4815	.4789	.4763	.4738	.4713	.4687	.4662	.4637
2.40	.4612	.4588	.4563	.4539	.4514	.4490	.4466	.4442	.4418	.4395	.4371	.4348
2.60	.4324	.4301	.4278	.4255	.4232	.4210	.4187	.4165	.4142	.4120	.4098	.4076
2.80	.4054	.4033	.4011	.3989	.3968	.3947	.3926	.3905	.3884	.3863	.3842	.3822
3.00	.3801	.3781	.3760	.3740	.3720	.3700	.3680	.3661	.3641	.3622	.3602	.3583
3.20	.3564	.3545	.3526	.3507	.3488	.3469	.3451	.3432	.3414	.3395	.3377	.3359
3.40	.3341	.3323	.3305	.3288	.3270	.3253	.3235	.3218	.3200	.3183	.3166	.3149
3.60	.3132	.3116	.3099	.3082	.3066	.3049	.3033	.3017	.3001	.2985	.2969	.2953
3.80	.2937	.2921	.2905	.2890	.2874	.2859	.2844	.2828	.2813	.2798	.2783	.2768
4.00	.2753	.2739	.2724	.2709	.2695	.2680	.2666	.2652	.2638	.2623	.2609	.2595
4.20	.2581	.2568	.2554	.2540	.2527	.2513	.2500	.2486	.2473	.2460	.2446	.2433
4.40	.2420	.2407	.2394	.2381	.2369	.2356	.2343	.2331	.2318	.2306	.2294	.2281
4.60	.2269	.2257	.2245	.2233	.2221	.2209	.2197	.2185	.2174	.2162	.2150	.2139
4.80	.2127	.2116	.2105	.2093	.2082	.2071	.2060	.2049	.2038	.2027	.2016	.2005
5.00	.1994	.1984	.1973	.1963	.1952	.1942	.1931	.1921	.1911	.1900	.1890	.1880
5.20	.1870	.1860	.1850	.1840	.1830	.1820	.1811	.1801	.1791	.1782	.1772	.1763
5.40	.1753	.1744	.1734	.1725	.1716	.1707	.1697	.1688	.1679	.1670	.1661	.1652
5.60	.1644	.1635	.1626	.1617	.1609	.1600	.1591	.1583	.1574	.1566	.1558	.1549
5.80	.1541	.1533	.1524	.1516	.1508	.1500	.1492	.1484	.1476	.1468	.1460	.1452
6.00	.1445	.1437	.1429	.1422	.1414	.1406	.1399	.1391	.1384	.1376	.1369	.1362
6.20	.1354	.1347	.1340	.1333	.1326	.1319	.1311	.1304	.1297	.1290	.1284	.1277
6.40	.1270	.1263	.1256	.1250	.1243	.1236	.1230	.1223	.1216	.1210	.1203	.1197
6.60	.1190	.1184	.1178	.1171	.1165	.1159	.1153	.1147	.1140	.1134	.1128	.1122
6.80	.1116	.1110	.1104	.1098	.1092	.1087	.1081	.1075	.1069	.1063	.1058	.1052
7.00	.1046	.1041	.1035	.1030	.1024	.1019	.1013	.1008	.1002	.0997	.0992	.0986

BI - 212

HALF-LIFE 60.60 MINUTES CALCULATION INTERVAL 1.0 MINUTES

MINUTES	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	1.0000	.9886	.9773	.9662	.9552	.9444	.9336	.9230	.9125	.9021
10.0	.8919	.8817	.8717	.8618	.8520	.8423	.8327	.8232	.8139	.8046
20.0	.7955	.7864	.7775	.7686	.7599	.7512	.7427	.7343	.7259	.7176
30.0	.7095	.7014	.6934	.6856	.6778	.6700	.6624	.6549	.6474	.6401
40.0	.6328	.6256	.6185	.6115	.6045	.5976	.5908	.5841	.5775	.5709
50.0	.5644	.5580	.5516	.5454	.5392	.5330	.5270	.5210	.5150	.5092
60.0	.5034	.4977	.4920	.4864	.4809	.4754	.4700	.4647	.4594	.4541
70.0	.4490	.4439	.4388	.4338	.4289	.4240	.4192	.4144	.4097	.4051
80.0	.4004	.3959	.3914	.3869	.3825	.3782	.3739	.3696	.3654	.3613
90.0	.3572	.3531	.3491	.3451	.3412	.3373	.3335	.3297	.3259	.3222
100.0	.3186	.3149	.3113	.3078	.3043	.3008	.2974	.2940	.2907	.2874
110.0	.2841	.2809	.2777	.2745	.2714	.2683	.2653	.2623	.2593	.2563
120.0	.2534	.2505	.2477	.2449	.2421	.2393	.2366	.2339	.2312	.2286
130.0	.2260	.2234	.2209	.2184	.2159	.2134	.2110	.2086	.2062	.2039
140.0	.2016	.1993	.1970	.1948	.1926	.1904	.1882	.1861	.1839	.1819
150.0	.1798	.1777	.1757	.1737	.1717	.1698	.1679	.1659	.1641	.1622
160.0	.1603	.1585	.1567	.1549	.1532	.1514	.1497	.1480	.1463	.1447
170.0	.1430	.1414	.1398	.1382	.1366	.1351	.1335	.1320	.1305	.1290
180.0	.1276	.1261	.1247	.1232	.1218	.1205	.1191	.1177	.1164	.1151
190.0	.1138	.1125	.1112	.1099	.1087	.1074	.1062	.1050	.1038	.1026
200.0	.1015	.1003	.0992	.0980	.0969	.0958	.0947	.0936	.0926	.0915

BI - 213

HALF-LIFE 47.00 MINUTES CALCULATION INTERVAL .5 MINUTES

MINUTES	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
					MINUTES					
0.0	1.0000	.9926	.9853	.9781	.9709	.9638	.9567	.9496	.9427	.9357
5.0	.9289	.9220	.9153	.9085	.9019	.8952	.8887	.8821	.8757	.8692
10.0	.8628	.8565	.8502	.8440	.8378	.8316	.8255	.8194	.8134	.8074
15.0	.8015	.7956	.7898	.7840	.7782	.7725	.7668	.7612	.7556	.7500
20.0	.7445	.7390	.7336	.7282	.7229	.7176	.7123	.7071	.7019	.6967
25.0	.6916	.6865	.6815	.6765	.6715	.6666	.6617	.6568	.6520	.6472
30.0	.6424	.6377	.6330	.6284	.6237	.6192	.6146	.6101	.6056	.6012
35.0	.5967	.5924	.5880	.5837	.5794	.5751	.5709	.5667	.5626	.5584
40.0	.5543	.5503	.5462	.5422	.5382	.5343	.5303	.5264	.5226	.5187
45.0	.5149	.5111	.5074	.5037	.5000	.4963	.4926	.4890	.4854	.4819
50.0	.4783	.4748	.4713	.4678	.4644	.4610	.4576	.4542	.4509	.4476
55.0	.4443	.4410	.4378	.4346	.4314	.4282	.4251	.4220	.4189	.4158
60.0	.4127	.4097	.4067	.4037	.4007	.3978	.3949	.3920	.3891	.3862
65.0	.3834	.3806	.3778	.3750	.3722	.3695	.3668	.3641	.3614	.3588
70.0	.3561	.3535	.3509	.3483	.3458	.3432	.3407	.3382	.3357	.3333
75.0	.3308	.3284	.3260	.3236	.3212	.3188	.3165	.3142	.3118	.3096
80.0	.3073	.3050	.3028	.3006	.2983	.2962	.2940	.2918	.2897	.2875
85.0	.2854	.2833	.2813	.2792	.2771	.2751	.2731	.2711	.2691	.2671
90.0	.2651	.2632	.2613	.2593	.2574	.2555	.2537	.2518	.2500	.2481
95.0	.2463	.2445	.2427	.2409	.2391	.2374	.2356	.2339	.2322	.2305
100.0	.2288	.2271	.2254	.2238	.2221	.2205	.2189	.2173	.2157	.2141
105.0	.2125	.2110	.2094	.2079	.2063	.2048	.2033	.2018	.2003	.1989
110.0	.1974	.1960	.1945	.1931	.1917	.1903	.1889	.1875	.1861	.1847
115.0	.1834	.1820	.1807	.1794	.1780	.1767	.1754	.1741	.1729	.1716
120.0	.1703	.1691	.1678	.1666	.1654	.1642	.1630	.1618	.1606	.1594
125.0	.1582	.1571	.1559	.1548	.1536	.1525	.1514	.1503	.1491	.1481
130.0	.1470	.1459	.1448	.1437	.1427	.1416	.1406	.1396	.1385	.1375
135.0	.1365	.1355	.1345	.1335	.1325	.1316	.1306	.1296	.1287	.1277
140.0	.1268	.1259	.1250	.1240	.1231	.1222	.1213	.1204	.1195	.1187
145.0	.1178	.1169	.1161	.1152	.1144	.1135	.1127	.1119	.1110	.1102
150.0	.1094	.1086	.1078	.1070	.1062	.1055	.1047	.1039	.1031	.1024
155.0	.1016	.1009	.1001	.0994	.0987	.0980	.0972	.0965	.0958	.0951

BI - 214

HALF-LIFE 19.70 MINUTES CALCULATION INTERVAL 5.0 SECONDS

MINUTES	SECONDS 0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0
0.00	1.0000	.9970	.9941	.9912	.9883	.9854	.9825	.9796	.9768	.9739	.9711	.9682
1.00	.9654	.9626	.9597	.9569	.9541	.9513	.9485	.9458	.9430	.9402	.9375	.9347
2.00	.9320	.9293	.9265	.9238	.9211	.9184	.9157	.9131	.9104	.9077	.9051	.9024
3.00	.8998	.8971	.8945	.8919	.8893	.8867	.8841	.8815	.8789	.8763	.8738	.8712
4.00	.8687	.8661	.8636	.8611	.8585	.8560	.8535	.8510	.8485	.8460	.8436	.8411
5.00	.8386	.8362	.8337	.8313	.8289	.8264	.8240	.8216	.8192	.8168	.8144	.8120
6.00	.8096	.8073	.8049	.8025	.8002	.7979	.7955	.7932	.7909	.7885	.7862	.7839
7.00	.7816	.7794	.7771	.7748	.7725	.7703	.7680	.7658	.7635	.7613	.7591	.7568
8.00	.7546	.7524	.7502	.7480	.7458	.7436	.7415	.7393	.7371	.7350	.7328	.7307
9.00	.7285	.7264	.7243	.7221	.7200	.7179	.7158	.7137	.7116	.7095	.7075	.7054
10.00	.7033	.7013	.6992	.6972	.6951	.6931	.6911	.6890	.6870	.6850	.6830	.6810
11.00	.6790	.6770	.6750	.6731	.6711	.6691	.6672	.6652	.6633	.6613	.6594	.6575
12.00	.6555	.6536	.6517	.6498	.6479	.6460	.6441	.6422	.6403	.6385	.6366	.6347
13.00	.6329	.6310	.6292	.6273	.6255	.6237	.6218	.6200	.6182	.6164	.6146	.6128
14.00	.6110	.6092	.6074	.6056	.6039	.6021	.6003	.5986	.5968	.5951	.5933	.5916
15.00	.5899	.5881	.5864	.5847	.5830	.5813	.5796	.5779	.5762	.5745	.5728	.5711
16.00	.5695	.5678	.5661	.5645	.5628	.5612	.5595	.5579	.5563	.5546	.5530	.5514
17.00	.5498	.5482	.5466	.5450	.5434	.5418	.5402	.5386	.5370	.5355	.5339	.5323
18.00	.5308	.5292	.5277	.5261	.5246	.5230	.5215	.5200	.5185	.5169	.5154	.5139
19.00	.5124	.5109	.5094	.5079	.5064	.5050	.5035	.5020	.5005	.4991	.4976	.4962
20.00	.4947	.4933	.4918	.4904	.4889	.4875	.4861	.4846	.4832	.4818	.4804	.4790
21.00	.4776	.4762	.4748	.4734	.4720	.4706	.4693	.4679	.4665	.4652	.4638	.4624
22.00	.4611	.4597	.4584	.4570	.4557	.4544	.4530	.4517	.4504	.4491	.4478	.4464
23.00	.4451	.4438	.4425	.4412	.4399	.4387	.4374	.4361	.4348	.4335	.4323	.4310
24.00	.4297	.4285	.4272	.4260	.4247	.4235	.4223	.4210	.4198	.4186	.4173	.4161
25.00	.4149	.4137	.4125	.4113	.4100	.4088	.4077	.4065	.4053	.4041	.4029	.4017
26.00	.4005	.3994	.3982	.3970	.3959	.3947	.3936	.3924	.3913	.3901	.3890	.3878
27.00	.3867	.3856	.3844	.3833	.3822	.3811	.3799	.3788	.3777	.3766	.3755	.3744
28.00	.3733	.3722	.3711	.3701	.3690	.3679	.3668	.3657	.3647	.3636	.3625	.3615
29.00	.3604	.3594	.3583	.3573	.3562	.3552	.3541	.3531	.3521	.3510	.3500	.3490
30.00	.3480	.3469	.3459	.3449	.3439	.3429	.3419	.3409	.3399	.3389	.3379	.3369
31.00	.3359	.3349	.3340	.3330	.3320	.3310	.3301	.3291	.3281	.3272	.3262	.3253
32.00	.3243	.3234	.3224	.3215	.3205	.3196	.3186	.3177	.3168	.3159	.3149	.3140
33.00	.3131	.3122	.3113	.3103	.3094	.3085	.3076	.3067	.3058	.3049	.3040	.3032
34.00	.3023	.3014	.3005	.2996	.2987	.2979	.2970	.2961	.2953	.2944	.2935	.2927
35.00	.2918	.2910	.2901	.2893	.2884	.2876	.2867	.2859	.2850	.2842	.2834	.2825
36.00	.2817	.2809	.2801	.2793	.2784	.2776	.2768	.2760	.2752	.2744	.2736	.2728
37.00	.2720	.2712	.2704	.2696	.2688	.2680	.2672	.2665	.2657	.2649	.2641	.2633
38.00	.2626	.2618	.2610	.2603	.2595	.2588	.2580	.2572	.2565	.2557	.2550	.2542
39.00	.2535	.2528	.2520	.2513	.2505	.2498	.2491	.2483	.2476	.2469	.2462	.2454

BI - 214

HALF-LIFE 19.70 MINUTES CALCULATION INTERVAL 5.0 SECONDS

MINUTES	SECONDS 0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0
40.00	.2447	.2440	.2433	.2426	.2419	.2412	.2405	.2398	.2391	.2384	.2377	.2370
41.00	.2363	.2356	.2349	.2342	.2335	.2328	.2321	.2315	.2308	.2301	.2294	.2288
42.00	.2281	.2274	.2268	.2261	.2254	.2248	.2241	.2235	.2228	.2222	.2215	.2209
43.00	.2202	.2196	.2189	.2183	.2176	.2170	.2164	.2157	.2151	.2145	.2138	.2132
44.00	.2126	.2120	.2113	.2107	.2101	.2095	.2089	.2083	.2077	.2071	.2064	.2058
45.00	.2052	.2046	.2040	.2034	.2028	.2023	.2017	.2011	.2005	.1999	.1993	.1987
46.00	.1981	.1976	.1970	.1964	.1958	.1953	.1947	.1941	.1935	.1930	.1924	.1919
47.00	.1913	.1907	.1902	.1896	.1891	.1885	.1880	.1874	.1869	.1863	.1858	.1852
48.00	.1847	.1841	.1836	.1831	.1825	.1820	.1815	.1809	.1804	.1799	.1793	.1788
49.00	.1783	.1778	.1772	.1767	.1762	.1757	.1752	.1747	.1742	.1736	.1731	.1726
50.00	.1721	.1716	.1711	.1706	.1701	.1696	.1691	.1686	.1681	.1676	.1671	.1667
51.00	.1662	.1657	.1652	.1647	.1642	.1638	.1633	.1628	.1623	.1618	.1614	.1609
52.00	.1604	.1600	.1595	.1590	.1586	.1581	.1576	.1572	.1567	.1562	.1558	.1553
53.00	.1549	.1544	.1540	.1535	.1531	.1526	.1522	.1517	.1513	.1508	.1504	.1500
54.00	.1495	.1491	.1486	.1482	.1478	.1473	.1469	.1465	.1461	.1456	.1452	.1448
55.00	.1443	.1439	.1435	.1431	.1427	.1422	.1418	.1414	.1410	.1406	.1402	.1398
56.00	.1394	.1389	.1385	.1381	.1377	.1373	.1369	.1365	.1361	.1357	.1353	.1349
57.00	.1345	.1341	.1337	.1334	.1330	.1326	.1322	.1318	.1314	.1310	.1306	.1303
58.00	.1299	.1295	.1291	.1287	.1284	.1280	.1276	.1272	.1269	.1265	.1261	.1258
59.00	.1254	.1250	.1247	.1243	.1239	.1236	.1232	.1228	.1225	.1221	.1218	.1214
60.00	.1211	.1207	.1203	.1200	.1196	.1193	.1189	.1186	.1182	.1179	.1176	.1172
61.00	.1169	.1165	.1162	.1158	.1155	.1152	.1148	.1145	.1142	.1138	.1135	.1132
62.00	.1128	.1125	.1122	.1118	.1115	.1112	.1109	.1105	.1102	.1099	.1096	.1092
63.00	.1089	.1086	.1083	.1080	.1077	.1073	.1070	.1067	.1064	.1061	.1058	.1055
64.00	.1052	.1048	.1045	.1042	.1039	.1036	.1033	.1030	.1027	.1024	.1021	.1018
65.00	.1015	.1012	.1009	.1006	.1003	.1000	.0997	.0995	.0992	.0989	.0986	.0983

BR - 82

HALF-LIFE 35.70 HOURS CALCULATION INTERVAL 20.0 MINUTES

HOURS	MINUTES 0.0	20.0	40.0	60.0	80.0	100.0	120.0	140.0	160.0	180.0	200.0	220.0
0.00	1.0000	.9935	.9871	.9807	.9744	.9681	.9619	.9557	.9495	.9434	.9373	.9312
4.00	.9252	.9193	.9133	.9074	.9016	.8958	.8900	.8842	.8785	.8729	.8672	.8616
8.00	.8561	.8506	.8451	.8396	.8342	.8288	.8235	.8182	.8129	.8076	.8024	.7973
12.00	.7921	.7870	.7819	.7769	.7719	.7669	.7619	.7570	.7521	.7473	.7425	.7377
16.00	.7329	.7282	.7235	.7188	.7142	.7096	.7050	.7005	.6959	.6914	.6870	.6826
20.00	.6781	.6738	.6694	.6651	.6608	.6566	.6523	.6481	.6439	.6398	.6356	.6315
24.00	.6275	.6234	.6194	.6154	.6114	.6075	.6036	.5997	.5958	.5920	.5881	.5843
28.00	.5806	.5768	.5731	.5694	.5657	.5621	.5585	.5549	.5513	.5477	.5442	.5407
32.00	.5372	.5337	.5303	.5269	.5235	.5201	.5167	.5134	.5101	.5068	.5035	.5003
36.00	.4970	.4938	.4907	.4875	.4843	.4812	.4781	.4750	.4720	.4689	.4659	.4629
40.00	.4599	.4569	.4540	.4511	.4481	.4453	.4424	.4395	.4367	.4339	.4311	.4283
44.00	.4255	.4228	.4201	.4173	.4147	.4120	.4093	.4067	.4041	.4015	.3989	.3963
48.00	.3937	.3912	.3887	.3862	.3837	.3812	.3787	.3763	.3739	.3714	.3691	.3667
52.00	.3643	.3620	.3596	.3573	.3550	.3527	.3504	.3482	.3459	.3437	.3415	.3393
56.00	.3371	.3349	.3327	.3306	.3285	.3263	.3242	.3221	.3201	.3180	.3160	.3139
60.00	.3119	.3099	.3079	.3059	.3039	.3020	.3000	.2981	.2961	.2942	.2923	.2905
64.00	.2886	.2867	.2849	.2830	.2812	.2794	.2776	.2758	.2740	.2722	.2705	.2687
68.00	.2670	.2653	.2636	.2619	.2602	.2585	.2568	.2552	.2535	.2519	.2503	.2487
72.00	.2471	.2455	.2439	.2423	.2407	.2392	.2376	.2361	.2346	.2331	.2316	.2301
76.00	.2286	.2271	.2256	.2242	.2227	.2213	.2199	.2185	.2171	.2157	.2143	.2129
80.00	.2115	.2101	.2088	.2074	.2061	.2048	.2034	.2021	.2008	.1995	.1982	.1970
84.00	.1957	.1944	.1932	.1919	.1907	.1895	.1882	.1870	.1858	.1846	.1834	.1822
88.00	.1811	.1799	.1787	.1776	.1764	.1753	.1742	.1730	.1719	.1708	.1697	.1686
92.00	.1675	.1665	.1654	.1643	.1633	.1622	.1612	.1601	.1591	.1581	.1570	.1560
96.00	.1550	.1540	.1530	.1520	.1511	.1501	.1491	.1481	.1472	.1462	.1453	.1444
100.00	.1434	.1425	.1416	.1407	.1398	.1389	.1380	.1371	.1362	.1353	.1344	.1336
104.00	.1327	.1318	.1310	.1302	.1293	.1285	.1276	.1268	.1260	.1252	.1244	.1236
108.00	.1228	.1220	.1212	.1204	.1196	.1189	.1181	.1173	.1166	.1158	.1151	.1143
112.00	.1136	.1129	.1121	.1114	.1107	.1100	.1093	.1086	.1079	.1072	.1065	.1058
116.00	.1051	.1044	.1038	.1031	.1024	.1018	.1011	.1005	.0998	.0992	.0985	.0979

CD - 109

HALF-LIFE 1.29 YEARS CALCULATION INTERVAL 5.0 DAYS

DAYS	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0
0.0	1.0000	.9926	.9853	.9781	.9709	.9638	.9567	.9497	.9428	.9359
50.0	.9290	.9222	.9154	.9087	.9020	.8954	.8889	.8823	.8759	.8694
100.0	.8631	.8567	.8504	.8442	.8380	.8319	.8258	.8197	.8137	.8077
150.0	.8018	.7959	.7901	.7843	.7785	.7729	.7672	.7615	.7560	.7504
200.0	.7449	.7394	.7340	.7286	.7233	.7180	.7127	.7075	.7023	.6972
250.0	.6920	.6870	.6819	.6769	.6720	.6670	.6621	.6573	.6525	.6477
300.0	.6429	.6382	.6335	.6289	.6243	.6197	.6152	.6106	.6062	.6017
350.0	.5973	.5929	.5886	.5843	.5800	.5757	.5715	.5673	.5631	.5590
400.0	.5549	.5508	.5468	.5428	.5388	.5349	.5309	.5270	.5232	.5193
450.0	.5155	.5118	.5080	.5043	.5006	.4969	.4933	.4896	.4861	.4825
500.0	.4789	.4754	.4719	.4685	.4651	.4616	.4583	.4549	.4516	.4482
550.0	.4450	.4417	.4385	.4352	.4320	.4289	.4257	.4226	.4195	.4164
600.0	.4134	.4103	.4073	.4043	.4014	.3984	.3955	.3926	.3897	.3869
650.0	.3840	.3812	.3784	.3757	.3729	.3702	.3674	.3648	.3621	.3594
700.0	.3568	.3542	.3516	.3490	.3464	.3439	.3414	.3389	.3364	.3339
750.0	.3315	.3290	.3266	.3242	.3218	.3195	.3171	.3148	.3125	.3102
800.0	.3079	.3057	.3034	.3012	.2990	.2968	.2946	.2925	.2903	.2882
850.0	.2861	.2840	.2819	.2798	.2778	.2757	.2737	.2717	.2697	.2677
900.0	.2658	.2638	.2619	.2600	.2581	.2562	.2543	.2524	.2506	.2487
950.0	.2469	.2451	.2433	.2415	.2397	.2380	.2362	.2345	.2328	.2311
1000.0	.2294	.2277	.2260	.2244	.2227	.2211	.2195	.2179	.2163	.2147
1050.0	.2131	.2115	.2100	.2085	.2069	.2054	.2039	.2024	.2009	.1994
1100.0	.1980	.1965	.1951	.1937	.1922	.1908	.1894	.1880	.1867	.1853
1150.0	.1839	.1826	.1812	.1799	.1786	.1773	.1760	.1747	.1734	.1721
1200.0	.1709	.1696	.1684	.1671	.1659	.1647	.1635	.1623	.1611	.1599
1250.0	.1587	.1576	.1564	.1553	.1541	.1530	.1519	.1508	.1497	.1486
1300.0	.1475	.1464	.1453	.1443	.1432	.1421	.1411	.1401	.1390	.1380
1350.0	.1370	.1360	.1350	.1340	.1330	.1321	.1311	.1301	.1292	.1282
1400.0	.1273	.1263	.1254	.1245	.1236	.1227	.1218	.1209	.1200	.1191
1450.0	.1182	.1174	.1165	.1157	.1149	.1140	.1131	.1123	.1115	.1107
1500.0	.1099	.1090	.1082	.1075	.1067	.1059	.1051	.1043	.1036	.1028
1550.0	.1021	.1013	.1006	.0998	.0991	.0984	.0976	.0969	.0962	.0955

CA - 45

HALF-LIFE 165.00 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	1.0000	.9958	.9916	.9874	.9833	.9792	.9751	.9710	.9669	.9628
10.0	.9588	.9548	.9508	.9468	.9428	.9389	.9349	.9310	.9271	.9232
20.0	.9194	.9155	.9117	.9079	.9040	.9003	.8965	.8927	.8890	.8853
30.0	.8815	.8778	.8742	.8705	.8669	.8632	.8596	.8560	.8524	.8488
40.0	.8453	.8417	.8382	.8347	.8312	.8277	.8242	.8208	.8173	.8139
50.0	.8105	.8071	.8037	.8003	.7970	.7937	.7903	.7870	.7837	.7804
60.0	.7772	.7739	.7707	.7674	.7642	.7610	.7578	.7546	.7515	.7483
70.0	.7452	.7421	.7389	.7358	.7328	.7297	.7266	.7236	.7206	.7175
80.0	.7145	.7115	.7085	.7056	.7026	.6997	.6967	.6938	.6909	.6880
90.0	.6851	.6823	.6794	.6765	.6737	.6709	.6681	.6653	.6625	.6597
100.0	.6569	.6542	.6514	.6487	.6460	.6433	.6406	.6379	.6352	.6326
110.0	.6299	.6273	.6246	.6220	.6194	.6168	.6142	.6117	.6091	.6065
120.0	.6040	.6015	.5989	.5964	.5939	.5914	.5890	.5865	.5840	.5816
130.0	.5791	.5767	.5743	.5719	.5695	.5671	.5647	.5624	.5600	.5577
140.0	.5553	.5530	.5507	.5484	.5461	.5438	.5415	.5392	.5370	.5347
150.0	.5325	.5302	.5280	.5258	.5236	.5214	.5192	.5170	.5149	.5127
160.0	.5106	.5084	.5063	.5042	.5021	.5000	.4979	.4958	.4937	.4916
170.0	.4896	.4875	.4855	.4834	.4814	.4794	.4774	.4754	.4734	.4714
180.0	.4694	.4674	.4655	.4635	.4616	.4597	.4577	.4558	.4539	.4520
190.0	.4501	.4482	.4463	.4445	.4426	.4407	.4389	.4371	.4352	.4334
200.0	.4316	.4298	.4280	.4262	.4244	.4226	.4208	.4191	.4173	.4156
210.0	.4138	.4121	.4104	.4086	.4069	.4052	.4035	.4018	.4001	.3985
220.0	.3968	.3951	.3935	.3918	.3902	.3886	.3869	.3853	.3837	.3821
230.0	.3805	.3789	.3773	.3757	.3741	.3726	.3710	.3694	.3679	.3664
240.0	.3648	.3633	.3618	.3603	.3587	.3572	.3557	.3542	.3528	.3513
250.0	.3498	.3483	.3469	.3454	.3440	.3425	.3411	.3397	.3382	.3368
260.0	.3354	.3340	.3326	.3312	.3298	.3284	.3271	.3257	.3243	.3230
270.0	.3216	.3203	.3189	.3176	.3163	.3149	.3136	.3123	.3110	.3097
280.0	.3084	.3071	.3058	.3045	.3032	.3020	.3007	.2994	.2982	.2969
290.0	.2957	.2945	.2932	.2920	.2908	.2895	.2883	.2871	.2859	.2847
300.0	.2835	.2823	.2812	.2800	.2788	.2776	.2765	.2753	.2742	.2730
310.0	.2719	.2707	.2696	.2685	.2673	.2662	.2651	.2640	.2629	.2618
320.0	.2607	.2596	.2585	.2574	.2563	.2553	.2542	.2531	.2521	.2510
330.0	.2500	.2489	.2479	.2468	.2458	.2448	.2437	.2427	.2417	.2407
340.0	.2397	.2387	.2377	.2367	.2357	.2347	.2337	.2327	.2317	.2308
350.0	.2298	.2288	.2279	.2269	.2260	.2250	.2241	.2231	.2222	.2213
360.0	.2203	.2194	.2185	.2176	.2167	.2158	.2149	.2140	.2131	.2122
370.0	.2113	.2104	.2095	.2086	.2078	.2069	.2060	.2052	.2043	.2034
380.0	.2026	.2017	.2009	.2000	.1992	.1984	.1975	.1967	.1959	.1951
390.0	.1943	.1934	.1926	.1918	.1910	.1902	.1894	.1886	.1878	.1870

CD - 115

HALF-LIFE 2.30 DAYS CALCULATION INTERVAL .5 HOURS

DAYS	HOURS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
0.00	1.0000	.9937	.9875	.9813	.9751	.9690	.9630	.9570	.9510	.9450	.9391	.9332
.25	.9274	.9216	.9158	.9101	.9044	.8987	.8931	.8875	.8819	.8764	.8709	.8655
.50	.8601	.8547	.8493	.8440	.8387	.8335	.8283	.8231	.8179	.8128	.8077	.8027
.75	.7976	.7927	.7877	.7828	.7779	.7730	.7682	.7633	.7586	.7538	.7491	.7444
1.00	.7398	.7351	.7305	.7260	.7214	.7169	.7124	.7079	.7035	.6991	.6947	.6904
1.25	.6861	.6818	.6775	.6733	.6690	.6649	.6607	.6566	.6525	.6484	.6443	.6403
1.50	.6363	.6323	.6283	.6244	.6205	.6166	.6127	.6089	.6051	.6013	.5975	.5938
1.75	.5901	.5864	.5827	.5791	.5755	.5719	.5683	.5647	.5612	.5577	.5542	.5507
2.00	.5473	.5438	.5404	.5370	.5337	.5303	.5270	.5237	.5205	.5172	.5140	.5107
2.25	.5075	.5044	.5012	.4981	.4950	.4919	.4888	.4857	.4827	.4797	.4767	.4737
2.50	.4707	.4678	.4648	.4619	.4590	.4562	.4533	.4505	.4476	.4448	.4421	.4393
2.75	.4365	.4338	.4311	.4284	.4257	.4230	.4204	.4178	.4152	.4126	.4100	.4074
3.00	.4049	.4023	.3998	.3973	.3948	.3923	.3899	.3874	.3850	.3826	.3802	.3778
3.25	.3755	.3731	.3708	.3685	.3662	.3639	.3616	.3593	.3571	.3548	.3526	.3504
3.50	.3482	.3460	.3439	.3417	.3396	.3375	.3353	.3332	.3312	.3291	.3270	.3250
3.75	.3229	.3209	.3189	.3169	.3149	.3130	.3110	.3091	.3071	.3052	.3033	.3014
4.00	.2995	.2976	.2958	.2939	.2921	.2902	.2884	.2866	.2848	.2830	.2813	.2795
4.25	.2778	.2760	.2743	.2726	.2709	.2692	.2675	.2658	.2642	.2625	.2609	.2592
4.50	.2576	.2560	.2544	.2528	.2512	.2496	.2481	.2465	.2450	.2434	.2419	.2404
4.75	.2389	.2374	.2359	.2344	.2330	.2315	.2301	.2286	.2272	.2258	.2244	.2230
5.00	.2216	.2202	.2188	.2174	.2161	.2147	.2134	.2120	.2107	.2094	.2081	.2068
5.25	.2055	.2042	.2029	.2016	.2004	.1991	.1979	.1966	.1954	.1942	.1930	.1918
5.50	.1906	.1894	.1882	.1870	.1858	.1847	.1835	.1824	.1812	.1801	.1790	.1778
5.75	.1767	.1756	.1745	.1734	.1723	.1713	.1702	.1691	.1681	.1670	.1660	.1649
6.00	.1639	.1629	.1619	.1608	.1598	.1588	.1578	.1568	.1559	.1549	.1539	.1530
6.25	.1520	.1510	.1501	.1492	.1482	.1473	.1464	.1455	.1446	.1436	.1427	.1419
6.50	.1410	.1401	.1392	.1383	.1375	.1366	.1358	.1349	.1341	.1332	.1324	.1316
6.75	.1307	.1299	.1291	.1283	.1275	.1267	.1259	.1251	.1243	.1235	.1228	.1220
7.00	.1212	.1205	.1197	.1190	.1182	.1175	.1168	.1160	.1153	.1146	.1139	.1131
7.25	.1124	.1117	.1110	.1103	.1096	.1090	.1083	.1076	.1069	.1063	.1056	.1049
7.50	.1043	.1036	.1030	.1023	.1017	.1010	.1004	.0998	.0992	.0985	.0979	.0973

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CA - 45

HALF-LIFE 165.00 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
400.0	.1863	.1855	.1847	.1839	.1832	.1824	.1816	.1809	.1801	.1793
410.0	.1786	.1778	.1771	.1764	.1756	.1749	.1741	.1734	.1727	.1720
420.0	.1712	.1705	.1698	.1691	.1684	.1677	.1670	.1663	.1656	.1649
430.0	.1642	.1635	.1628	.1621	.1615	.1608	.1601	.1594	.1588	.1581
440.0	.1574	.1568	.1561	.1555	.1548	.1542	.1535	.1529	.1522	.1516
450.0	.1510	.1503	.1497	.1491	.1484	.1478	.1472	.1466	.1460	.1454
460.0	.1447	.1441	.1435	.1429	.1423	.1417	.1411	.1406	.1400	.1394
470.0	.1388	.1382	.1376	.1371	.1365	.1359	.1353	.1348	.1342	.1336
480.0	.1331	.1325	.1320	.1314	.1309	.1303	.1298	.1292	.1287	.1281
490.0	.1276	.1271	.1265	.1260	.1255	.1250	.1244	.1239	.1234	.1229
500.0	.1224	.1218	.1213	.1208	.1203	.1198	.1193	.1188	.1183	.1178
510.0	.1173	.1168	.1163	.1158	.1154	.1149	.1144	.1139	.1134	.1130
520.0	.1125	.1120	.1115	.1111	.1106	.1101	.1097	.1092	.1088	.1083
530.0	.1079	.1074	.1070	.1065	.1061	.1056	.1052	.1047	.1043	.1039
540.0	.1034	.1030	.1026	.1021	.1017	.1013	.1008	.1004	.1000	.0996

CA - 47

HALF-LIFE 4.50 DAYS CALCULATION INTERVAL .5 HOURS

DAYS	HOURS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
0.00	1.0000	.9967	.9936	.9904	.9872	.9840	.9809	.9777	.9746	.9715	.9684	.9653
.25	.9622	.9591	.9560	.9530	.9499	.9469	.9438	.9408	.9378	.9348	.9318	.9288
.50	.9258	.9229	.9199	.9170	.9140	.9111	.9082	.9053	.9024	.8995	.8966	.8937
.75	.8908	.8880	.8851	.8823	.8795	.8767	.8739	.8711	.8683	.8655	.8627	.8599
1.00	.8572	.8544	.8517	.8490	.8463	.8435	.8408	.8382	.8355	.8328	.8301	.8275
1.25	.8248	.8222	.8195	.8169	.8143	.8117	.8091	.8065	.8039	.8013	.7988	.7962
1.50	.7937	.7911	.7886	.7860	.7835	.7810	.7785	.7760	.7735	.7711	.7686	.7661
1.75	.7637	.7612	.7588	.7564	.7539	.7515	.7491	.7467	.7443	.7419	.7395	.7372
2.00	.7348	.7325	.7301	.7278	.7254	.7231	.7208	.7185	.7162	.7139	.7116	.7093
2.25	.7071	.7048	.7025	.7003	.6980	.6958	.6936	.6914	.6891	.6869	.6847	.6825
2.50	.6803	.6782	.6760	.6738	.6717	.6695	.6674	.6652	.6631	.6610	.6589	.6567
2.75	.6546	.6525	.6505	.6484	.6463	.6442	.6422	.6401	.6380	.6360	.6340	.6319
3.00	.6299	.6279	.6259	.6239	.6219	.6199	.6179	.6159	.6139	.6120	.6100	.6081
3.25	.6061	.6042	.6022	.6003	.5984	.5965	.5946	.5926	.5907	.5889	.5870	.5851
3.50	.5832	.5813	.5795	.5776	.5758	.5739	.5721	.5703	.5684	.5666	.5648	.5630
3.75	.5612	.5594	.5576	.5558	.5540	.5522	.5505	.5487	.5470	.5452	.5435	.5417
4.00	.5400	.5383	.5365	.5348	.5331	.5314	.5297	.5280	.5263	.5246	.5229	.5213
4.25	.5196	.5179	.5163	.5146	.5130	.5113	.5097	.5080	.5064	.5048	.5032	.5016
4.50	.5000	.4983	.4968	.4952	.4936	.4920	.4904	.4888	.4873	.4857	.4842	.4826
4.75	.4811	.4795	.4780	.4765	.4749	.4734	.4719	.4704	.4689	.4674	.4659	.4644
5.00	.4629	.4614	.4599	.4585	.4570	.4555	.4541	.4526	.4512	.4497	.4483	.4468
5.25	.4454	.4440	.4426	.4411	.4397	.4383	.4369	.4355	.4341	.4327	.4313	.4300
5.50	.4286	.4272	.4258	.4245	.4231	.4218	.4204	.4191	.4177	.4164	.4150	.4137
5.75	.4124	.4111	.4097	.4084	.4071	.4058	.4045	.4032	.4019	.4006	.3994	.3981
6.00	.3968	.3955	.3943	.3930	.3917	.3905	.3892	.3880	.3867	.3855	.3843	.3830
6.25	.3818	.3806	.3794	.3782	.3769	.3757	.3745	.3733	.3721	.3709	.3697	.3686
6.50	.3674	.3662	.3650	.3639	.3627	.3615	.3604	.3592	.3581	.3569	.3558	.3546
6.75	.3535	.3524	.3512	.3501	.3490	.3479	.3468	.3457	.3445	.3434	.3423	.3412
7.00	.3401	.3391	.3380	.3369	.3358	.3347	.3337	.3326	.3315	.3305	.3294	.3283
7.25	.3273	.3262	.3252	.3242	.3231	.3221	.3211	.3200	.3190	.3180	.3170	.3159
7.50	.3149	.3139	.3129	.3119	.3109	.3099	.3089	.3079	.3069	.3060	.3050	.3040
7.75	.3030	.3021	.3011	.3001	.2992	.2982	.2973	.2963	.2954	.2944	.2935	.2925
8.00	.2916	.2906	.2897	.2888	.2879	.2869	.2860	.2851	.2842	.2833	.2824	.2815
8.25	.2806	.2797	.2788	.2779	.2770	.2761	.2752	.2743	.2735	.2726	.2717	.2708
8.50	.2700	.2691	.2682	.2674	.2665	.2657	.2648	.2640	.2631	.2623	.2614	.2606
8.75	.2598	.2589	.2581	.2573	.2565	.2556	.2548	.2540	.2532	.2524	.2516	.2508
9.00	.2500	.2491	.2484	.2476	.2468	.2460	.2452	.2444	.2436	.2428	.2421	.2413
9.25	.2405	.2397	.2390	.2382	.2374	.2367	.2359	.2352	.2344	.2337	.2329	.2322
9.50	.2314	.2307	.2299	.2292	.2285	.2277	.2270	.2263	.2256	.2248	.2241	.2234
9.75	.2227	.2220	.2213	.2205	.2198	.2191	.2184	.2177	.2170	.2163	.2156	.2150

CA - 47

HALF-LIFE 4.50 DAYS CALCULATION INTERVAL .5 HOURS

DAYS	HOURS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
10.00	.2143	.2136	.2129	.2122	.2115	.2109	.2102	.2095	.2088	.2082	.2075	.2068
10.25	.2062	.2055	.2048	.2042	.2035	.2029	.2022	.2016	.2009	.2003	.1997	.1990
10.50	.1984	.1977	.1971	.1965	.1958	.1952	.1946	.1940	.1933	.1927	.1921	.1915
10.75	.1909	.1903	.1897	.1891	.1884	.1878	.1872	.1866	.1860	.1854	.1849	.1843
11.00	.1837	.1831	.1825	.1819	.1813	.1807	.1802	.1796	.1790	.1784	.1779	.1773
11.25	.1767	.1762	.1756	.1750	.1745	.1739	.1734	.1728	.1722	.1717	.1711	.1706
11.50	.1700	.1695	.1690	.1684	.1679	.1673	.1668	.1663	.1657	.1652	.1647	.1642
11.75	.1636	.1631	.1626	.1621	.1615	.1610	.1605	.1600	.1595	.1590	.1585	.1579
12.00	.1574	.1569	.1564	.1559	.1554	.1549	.1544	.1539	.1534	.1530	.1525	.1520
12.25	.1515	.1510	.1505	.1500	.1496	.1491	.1486	.1481	.1477	.1472	.1467	.1462
12.50	.1458	.1453	.1448	.1444	.1439	.1434	.1430	.1425	.1421	.1416	.1412	.1407
12.75	.1403	.1398	.1394	.1389	.1385	.1380	.1376	.1371	.1367	.1363	.1358	.1354
13.00	.1350	.1345	.1341	.1337	.1332	.1328	.1324	.1320	.1315	.1311	.1307	.1303
13.25	.1299	.1294	.1290	.1286	.1282	.1278	.1274	.1270	.1266	.1262	.1258	.1254
13.50	.1250	.1246	.1242	.1238	.1234	.1230	.1226	.1222	.1218	.1214	.1210	.1206
13.75	.1202	.1198	.1195	.1191	.1187	.1183	.1179	.1176	.1172	.1168	.1164	.1161
14.00	.1157	.1153	.1149	.1146	.1142	.1138	.1135	.1131	.1128	.1124	.1120	.1117
14.25	.1113	.1110	.1106	.1102	.1099	.1095	.1092	.1088	.1085	.1081	.1078	.1075
14.50	.1071	.1068	.1064	.1061	.1057	.1054	.1051	.1047	.1044	.1041	.1037	.1034
14.75	.1031	.1027	.1024	.1021	.1017	.1014	.1011	.1008	.1004	.1001	.0998	.0995

C - 14

HALF-LIFE 5770.00 YEARS CALCULATION INTERVAL 50.0 YEARS

YEARS	0.0	50.0	100.0	150.0	200.0	250.0	300.0	350.0	400.0	450.0
0.0	1.0000	.9940	.9880	.9821	.9762	.9704	.9646	.9588	.9530	.9473
500.0	.9417	.9360	.9304	.9248	.9193	.9138	.9083	.9029	.8975	.8921
1000.0	.8868	.8814	.8762	.8709	.8657	.8605	.8554	.8502	.8452	.8401
1500.0	.8351	.8301	.8251	.8201	.8152	.8104	.8055	.8007	.7959	.7911
2000.0	.7864	.7817	.7770	.7723	.7677	.7631	.7585	.7540	.7495	.7450
2500.0	.7405	.7361	.7317	.7273	.7229	.7186	.7143	.7100	.7058	.7016
3000.0	.6974	.6932	.6890	.6849	.6808	.6767	.6727	.6686	.6646	.6607
3500.0	.6567	.6528	.6489	.6450	.6411	.6373	.6335	.6297	.6259	.6221
4000.0	.6184	.6147	.6110	.6074	.6037	.6001	.5965	.5929	.5894	.5859
4500.0	.5824	.5789	.5754	.5720	.5685	.5651	.5617	.5584	.5550	.5517
5000.0	.5484	.5451	.5419	.5386	.5354	.5322	.5290	.5258	.5227	.5195
5500.0	.5164	.5133	.5103	.5072	.5042	.5012	.4982	.4952	.4922	.4893
6000.0	.4863	.4834	.4805	.4776	.4748	.4719	.4691	.4663	.4635	.4607
6500.0	.4580	.4552	.4525	.4498	.4471	.4444	.4418	.4391	.4365	.4339
7000.0	.4313	.4287	.4261	.4236	.4210	.4185	.4160	.4135	.4110	.4086
7500.0	.4061	.4037	.4013	.3989	.3965	.3941	.3917	.3894	.3871	.3848
8000.0	.3824	.3802	.3779	.3756	.3734	.3711	.3689	.3667	.3645	.3623
8500.0	.3601	.3580	.3558	.3537	.3516	.3495	.3474	.3453	.3432	.3412
9000.0	.3391	.3371	.3351	.3331	.3311	.3291	.3271	.3252	.3232	.3213
9500.0	.3194	.3175	.3156	.3137	.3118	.3099	.3081	.3062	.3044	.3026
10000.0	.3008	.2990	.2972	.2954	.2936	.2919	.2901	.2884	.2866	.2849
10500.0	.2832	.2815	.2798	.2782	.2765	.2748	.2732	.2716	.2699	.2683
11000.0	.2667	.2651	.2635	.2619	.2604	.2588	.2573	.2557	.2542	.2527
11500.0	.2512	.2496	.2482	.2467	.2452	.2437	.2423	.2408	.2394	.2379
12000.0	.2365	.2351	.2337	.2323	.2309	.2295	.2281	.2268	.2254	.2241
12500.0	.2227	.2214	.2201	.2187	.2174	.2161	.2148	.2135	.2123	.2110
13000.0	.2097	.2085	.2072	.2060	.2048	.2035	.2023	.2011	.1999	.1987
13500.0	.1975	.1963	.1951	.1940	.1928	.1917	.1905	.1894	.1882	.1871
14000.0	.1860	.1849	.1838	.1827	.1816	.1805	.1794	.1783	.1773	.1762
14500.0	.1751	.1741	.1730	.1720	.1710	.1700	.1689	.1679	.1669	.1659
15000.0	.1649	.1639	.1630	.1620	.1610	.1600	.1591	.1581	.1572	.1562
15500.0	.1553	.1544	.1535	.1525	.1516	.1507	.1498	.1489	.1480	.1471
16000.0	.1463	.1454	.1445	.1436	.1428	.1419	.1411	.1402	.1394	.1386
16500.0	.1377	.1369	.1361	.1353	.1345	.1336	.1328	.1321	.1313	.1305
17000.0	.1297	.1289	.1281	.1274	.1266	.1259	.1251	.1244	.1236	.1229
17500.0	.1221	.1214	.1207	.1199	.1192	.1185	.1178	.1171	.1164	.1157
18000.0	.1150	.1143	.1136	.1130	.1123	.1116	.1109	.1103	.1096	.1090
18500.0	.1083	.1077	.1070	.1064	.1057	.1051	.1045	.1038	.1032	.1026
19000.0	.1020	.1014	.1008	.1002	.0996	.0990	.0984	.0978	.0972	.0966

CE - 141

HALF-LIFE 32.50 DAYS CALCULATION INTERVAL 4.0 HOURS

DAYS	HOURS 0.0	4.0	8.0	12.0	16.0	20.0	24.0	28.0	32.0	36.0	40.0	44.0
0.00	1.0000	.9964	.9929	.9893	.9858	.9823	.9788	.9754	.9719	.9685	.9650	.9616
2.00	.9582	.9548	.9514	.9480	.9447	.9413	.9380	.9346	.9313	.9280	.9247	.9214
4.00	.9182	.9149	.9117	.9084	.9052	.9020	.8988	.8956	.8924	.8893	.8861	.8830
6.00	.8798	.8767	.8736	.8705	.8674	.8643	.8613	.8582	.8552	.8521	.8491	.8461
8.00	.8431	.8401	.8371	.8341	.8312	.8282	.8253	.8224	.8195	.8165	.8136	.8108
10.00	.8079	.8050	.8022	.7993	.7965	.7937	.7908	.7880	.7852	.7824	.7797	.7769
12.00	.7741	.7714	.7687	.7659	.7632	.7605	.7578	.7551	.7524	.7498	.7471	.7445
14.00	.7418	.7392	.7366	.7339	.7313	.7287	.7262	.7236	.7210	.7185	.7159	.7134
16.00	.7108	.7083	.7058	.7033	.7008	.6983	.6958	.6934	.6909	.6885	.6860	.6836
18.00	.6812	.6787	.6763	.6739	.6715	.6692	.6668	.6644	.6621	.6597	.6574	.6550
20.00	.6527	.6504	.6481	.6458	.6435	.6412	.6389	.6367	.6344	.6322	.6299	.6277
22.00	.6254	.6232	.6210	.6188	.6166	.6144	.6122	.6101	.6079	.6058	.6036	.6015
24.00	.5993	.5972	.5951	.5930	.5909	.5888	.5867	.5846	.5825	.5805	.5784	.5763
26.00	.5743	.5723	.5702	.5682	.5662	.5642	.5622	.5602	.5582	.5562	.5542	.5523
28.00	.5503	.5484	.5464	.5445	.5425	.5406	.5387	.5368	.5349	.5330	.5311	.5292
30.00	.5273	.5255	.5236	.5217	.5199	.5180	.5162	.5144	.5125	.5107	.5089	.5071
32.00	.5053	.5035	.5017	.5000	.4982	.4964	.4946	.4929	.4911	.4894	.4877	.4859
34.00	.4842	.4825	.4808	.4791	.4774	.4757	.4740	.4723	.4706	.4690	.4673	.4656
36.00	.4640	.4623	.4607	.4591	.4574	.4558	.4542	.4526	.4510	.4494	.4478	.4462
38.00	.4446	.4430	.4415	.4399	.4383	.4368	.4352	.4337	.4321	.4306	.4291	.4276
40.00	.4260	.4245	.4230	.4215	.4200	.4185	.4171	.4156	.4141	.4126	.4112	.4097
42.00	.4082	.4068	.4054	.4039	.4025	.4011	.3996	.3982	.3968	.3954	.3940	.3926
44.00	.3912	.3898	.3884	.3870	.3857	.3843	.3829	.3816	.3802	.3789	.3775	.3762
46.00	.3749	.3735	.3722	.3709	.3696	.3683	.3669	.3656	.3643	.3631	.3618	.3605
48.00	.3592	.3579	.3567	.3554	.3541	.3529	.3516	.3504	.3491	.3479	.3467	.3454
50.00	.3442	.3430	.3418	.3406	.3393	.3381	.3369	.3357	.3346	.3334	.3322	.3310
52.00	.3298	.3287	.3275	.3263	.3252	.3240	.3229	.3217	.3206	.3194	.3183	.3172
54.00	.3161	.3149	.3138	.3127	.3116	.3105	.3094	.3083	.3072	.3061	.3050	.3039
56.00	.3029	.3018	.3007	.2996	.2986	.2975	.2965	.2954	.2944	.2933	.2923	.2912
58.00	.2902	.2892	.2881	.2871	.2861	.2851	.2841	.2831	.2821	.2811	.2801	.2791
60.00	.2781	.2771	.2761	.2751	.2742	.2732	.2722	.2712	.2703	.2693	.2684	.2674
62.00	.2665	.2655	.2646	.2636	.2627	.2618	.2608	.2599	.2590	.2581	.2572	.2562
64.00	.2553	.2544	.2535	.2526	.2517	.2508	.2500	.2491	.2482	.2473	.2464	.2455
66.00	.2447	.2438	.2429	.2421	.2412	.2404	.2395	.2387	.2378	.2370	.2361	.2353
68.00	.2345	.2336	.2328	.2320	.2311	.2303	.2295	.2287	.2279	.2271	.2263	.2255
70.00	.2247	.2239	.2231	.2223	.2215	.2207	.2199	.2191	.2184	.2176	.2168	.2160
72.00	.2153	.2145	.2138	.2130	.2122	.2115	.2107	.2100	.2092	.2085	.2078	.2070
74.00	.2063	.2056	.2048	.2041	.2034	.2027	.2019	.2012	.2005	.1998	.1991	.1984
76.00	.1977	.1970	.1963	.1956	.1949	.1942	.1935	.1928	.1921	.1914	.1908	.1901
78.00	.1894	.1887	.1881	.1874	.1867	.1861	.1854	.1848	.1841	.1835	.1828	.1822

CE - 141

HALF-LIFE 32.50 DAYS CALCULATION INTERVAL 4.0 HOURS

DAYS	HOURS 0.0	4.0	8.0	12.0	16.0	20.0	24.0	28.0	32.0	36.0	40.0	44.0
80.00	.1815	.1809	.1802	.1796	.1789	.1783	.1777	.1770	.1764	.1758	.1752	.1745
82.00	.1739	.1733	.1727	.1721	.1715	.1709	.1703	.1696	.1690	.1684	.1678	.1673
84.00	.1667	.1661	.1655	.1649	.1643	.1637	.1631	.1626	.1620	.1614	.1608	.1603
86.00	.1597	.1591	.1586	.1580	.1574	.1569	.1563	.1558	.1552	.1547	.1541	.1536
88.00	.1530	.1525	.1519	.1514	.1509	.1503	.1498	.1493	.1487	.1482	.1477	.1472
90.00	.1466	.1461	.1456	.1451	.1446	.1440	.1435	.1430	.1425	.1420	.1415	.1410
92.00	.1405	.1400	.1395	.1390	.1385	.1380	.1375	.1371	.1366	.1361	.1356	.1351
94.00	.1346	.1342	.1337	.1332	.1327	.1323	.1318	.1313	.1309	.1304	.1299	.1295
96.00	.1290	.1286	.1281	.1276	.1272	.1267	.1263	.1258	.1254	.1250	.1245	.1241
98.00	.1236	.1232	.1227	.1223	.1219	.1214	.1210	.1206	.1202	.1197	.1193	.1189
100.00	.1185	.1180	.1176	.1172	.1168	.1164	.1160	.1155	.1151	.1147	.1143	.1139
102.00	.1135	.1131	.1127	.1123	.1119	.1115	.1111	.1107	.1103	.1099	.1095	.1092
104.00	.1088	.1084	.1080	.1076	.1072	.1069	.1065	.1061	.1057	.1053	.1050	.1046
106.00	.1042	.1039	.1035	.1031	.1028	.1024	.1020	.1017	.1013	.1009	.1006	.1002
108.00	.0999	.0995	.0992	.0988	.0985	.0981	.0978	.0974	.0971	.0967	.0964	.0960
110.00	.0957	.0954	.0950	.0947	.0943	.0940	.0937	.0933	.0930	.0927	.0924	.0920
112.00	.0917	.0914	.0911	.0907	.0904	.0901	.0898	.0894	.0891	.0888	.0885	.0882
114.00	.0879	.0876	.0872	.0869	.0866	.0863	.0860	.0857	.0854	.0851	.0848	.0845
116.00	.0842	.0839	.0836	.0833	.0830	.0827	.0824	.0821	.0818	.0815	.0813	.0810
118.00	.0807	.0804	.0801	.0798	.0795	.0793	.0790	.0787	.0784	.0781	.0779	.0776
120.00	.0773	.0770	.0768	.0765	.0762	.0759	.0757	.0754	.0751	.0749	.0746	.0743
122.00	.0741	.0738	.0736	.0733	.0730	.0728	.0725	.0723	.0720	.0717	.0715	.0712
124.00	.0710	.0707	.0705	.0702	.0700	.0697	.0695	.0692	.0690	.0687	.0685	.0683
126.00	.0680	.0678	.0675	.0673	.0671	.0668	.0666	.0663	.0661	.0659	.0656	.0654
128.00	.0652	.0649	.0647	.0645	.0643	.0640	.0638	.0636	.0633	.0631	.0629	.0627
130.00	.0625	.0622	.0620	.0618	.0616	.0614	.0611	.0609	.0607	.0605	.0603	.0601
132.00	.0598	.0596	.0594	.0592	.0590	.0588	.0586	.0584	.0582	.0580	.0578	.0575
134.00	.0573	.0571	.0569	.0567	.0565	.0563	.0561	.0559	.0557	.0555	.0553	.0551
136.00	.0549	.0547	.0546	.0544	.0542	.0540	.0538	.0536	.0534	.0532	.0530	.0528
138.00	.0526	.0525	.0523	.0521	.0519	.0517	.0515	.0514	.0512	.0510	.0508	.0506
140.00	.0504	.0503	.0501	.0499	.0497	.0496	.0494	.0492	.0490	.0489	.0487	.0485
142.00	.0483	.0482	.0480	.0478	.0477	.0475	.0473	.0472	.0470	.0468	.0466	.0465
144.00	.0463	.0462	.0460	.0458	.0457	.0455	.0453	.0452	.0450	.0449	.0447	.0445
146.00	.0444	.0442	.0441	.0439	.0438	.0436	.0434	.0433	.0431	.0430	.0428	.0427
148.00	.0425	.0424	.0422	.0421	.0419	.0418	.0416	.0415	.0413	.0412	.0410	.0409
150.00	.0407	.0406	.0405	.0403	.0402	.0400	.0399	.0397	.0396	.0395	.0393	.0392
152.00	.0390	.0389	.0388	.0386	.0385	.0384	.0382	.0381	.0379	.0378	.0377	.0375
154.00	.0374	.0373	.0371	.0370	.0369	.0368	.0366	.0365	.0364	.0362	.0361	.0360
156.00	.0358	.0357	.0356	.0355	.0353	.0352	.0351	.0350	.0348	.0347	.0346	.0345
158.00	.0343	.0342	.0341	.0340	.0339	.0337	.0336	.0335	.0334	.0333	.0331	.0330

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HALF-LIFE 32.50 DAYS CALCULATION INTERVAL 4.0 HOURS

DAYS	HOURS 0.0	4.0	8.0	12.0	16.0	20.0	24.0	28.0	32.0	36.0	40.0	44.0
160.00	.0329	.0328	.0327	.0326	.0324	.0323	.0322	.0321	.0320	.0319	.0318	.0316
162.00	.0315	.0314	.0313	.0312	.0311	.0310	.0309	.0308	.0307	.0305	.0304	.0303
164.00	.0302	.0301	.0300	.0299	.0298	.0297	.0296	.0295	.0294	.0293	.0292	.0291
166.00	.0290	.0289	.0287	.0286	.0285	.0284	.0283	.0282	.0281	.0280	.0279	.0278
168.00	.0277	.0276	.0275	.0274	.0274	.0273	.0272	.0271	.0270	.0269	.0268	.0267
170.00	.0266	.0265	.0264	.0263	.0262	.0261	.0260	.0259	.0258	.0257	.0257	.0256
172.00	.0255	.0254	.0253	.0252	.0251	.0250	.0249	.0248	.0248	.0247	.0246	.0245
174.00	.0244	.0243	.0242	.0241	.0241	.0240	.0239	.0238	.0237	.0236	.0235	.0235
176.00	.0234	.0233	.0232	.0231	.0231	.0230	.0229	.0228	.0227	.0226	.0226	.0225
178.00	.0224	.0223	.0222	.0222	.0221	.0220	.0219	.0219	.0218	.0217	.0216	.0215
180.00	.0215	.0214	.0213	.0212	.0212	.0211	.0210	.0209	.0209	.0208	.0207	.0206
182.00	.0206	.0205	.0204	.0204	.0203	.0202	.0201	.0201	.0200	.0199	.0198	.0198
184.00	.0197	.0196	.0196	.0195	.0194	.0194	.0193	.0192	.0192	.0191	.0190	.0190
186.00	.0189	.0188	.0187	.0187	.0186	.0185	.0185	.0184	.0184	.0183	.0182	.0182
188.00	.0181	.0180	.0180	.0179	.0178	.0178	.0177	.0176	.0176	.0175	.0175	.0174
190.00	.0173	.0173	.0172	.0172	.0171	.0170	.0170	.0169	.0168	.0168	.0167	.0167
192.00	.0166	.0165	.0165	.0164	.0164	.0163	.0163	.0162	.0161	.0161	.0160	.0160
194.00	.0159	.0159	.0158	.0157	.0157	.0156	.0156	.0155	.0155	.0154	.0154	.0153
196.00	.0152	.0152	.0151	.0151	.0150	.0150	.0149	.0149	.0148	.0148	.0147	.0147
198.00	.0146	.0146	.0145	.0145	.0144	.0143	.0143	.0142	.0142	.0141	.0141	.0140
200.00	.0140	.0139	.0139	.0138	.0138	.0137	.0137	.0137	.0136	.0136	.0135	.0135
202.00	.0134	.0134	.0133	.0133	.0132	.0132	.0131	.0131	.0130	.0130	.0129	.0129
204.00	.0128	.0128	.0128	.0127	.0127	.0126	.0126	.0125	.0125	.0124	.0124	.0124
206.00	.0123	.0123	.0122	.0122	.0121	.0121	.0120	.0120	.0120	.0119	.0119	.0118
208.00	.0118	.0118	.0117	.0117	.0116	.0116	.0115	.0115	.0115	.0114	.0114	.0113
210.00	.0113	.0113	.0112	.0112	.0111	.0111	.0111	.0110	.0110	.0109	.0109	.0109
212.00	.0108	.0108	.0107	.0107	.0107	.0106	.0106	.0106	.0105	.0105	.0104	.0104
214.00	.0104	.0103	.0103	.0103	.0102	.0102	.0102	.0101	.0101	.0100	.0100	.0100
216.00	.0099	.0099	.0099	.0098	.0098	.0098	.0097	.0097	.0097	.0096	.0096	.0096

CE - 144

HALF-LIFE 285.00 DAYS CALCULATION INTERVAL 2.0 DAYS

DAYS	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0
0.0	1.0000	.9951	.9903	.9855	.9807	.9759	.9712	.9665	.9618	.9571
20.0	.9525	.9479	.9433	.9387	.9341	.9296	.9251	.9206	.9161	.9117
40.0	.9072	.9028	.8985	.8941	.8898	.8854	.8812	.8769	.8726	.8684
60.0	.8642	.8600	.8558	.8517	.8475	.8434	.8393	.8352	.8312	.8272
80.0	.8231	.8191	.8152	.8112	.8073	.8034	.7995	.7956	.7917	.7879
100.0	.7841	.7803	.7765	.7727	.7689	.7652	.7615	.7578	.7541	.7505
120.0	.7468	.7432	.7396	.7360	.7324	.7289	.7253	.7218	.7183	.7148
140.0	.7114	.7079	.7045	.7011	.6977	.6943	.6909	.6876	.6842	.6809
160.0	.6776	.6743	.6710	.6678	.6645	.6613	.6581	.6549	.6517	.6486
180.0	.6454	.6423	.6392	.6361	.6330	.6299	.6269	.6238	.6208	.6178
200.0	.6148	.6118	.6088	.6059	.6029	.6000	.5971	.5942	.5913	.5884
220.0	.5856	.5827	.5799	.5771	.5743	.5715	.5687	.5660	.5632	.5605
240.0	.5578	.5551	.5524	.5497	.5470	.5444	.5417	.5391	.5365	.5339
260.0	.5313	.5287	.5262	.5236	.5211	.5185	.5160	.5135	.5110	.5085
280.0	.5061	.5036	.5012	.4987	.4963	.4939	.4915	.4891	.4868	.4844
300.0	.4820	.4797	.4774	.4751	.4727	.4705	.4682	.4659	.4636	.4614
320.0	.4591	.4569	.4547	.4525	.4503	.4481	.4459	.4438	.4416	.4395
340.0	.4373	.4352	.4331	.4310	.4289	.4268	.4248	.4227	.4207	.4186
360.0	.4166	.4146	.4125	.4105	.4086	.4066	.4046	.4026	.4007	.3987
380.0	.3968	.3949	.3930	.3911	.3892	.3873	.3854	.3835	.3817	.3798
400.0	.3780	.3761	.3743	.3725	.3707	.3689	.3671	.3653	.3635	.3618
420.0	.3600	.3583	.3565	.3548	.3531	.3514	.3497	.3480	.3463	.3446
440.0	.3429	.3413	.3396	.3379	.3363	.3347	.3331	.3314	.3298	.3282
460.0	.3266	.3250	.3235	.3219	.3203	.3188	.3172	.3157	.3142	.3126
480.0	.3111	.3096	.3081	.3066	.3051	.3036	.3022	.3007	.2992	.2978
500.0	.2963	.2949	.2935	.2921	.2906	.2892	.2878	.2864	.2850	.2837
520.0	.2823	.2809	.2795	.2782	.2768	.2755	.2742	.2728	.2715	.2702
540.0	.2689	.2676	.2663	.2650	.2637	.2624	.2611	.2599	.2586	.2574
560.0	.2561	.2549	.2536	.2524	.2512	.2500	.2487	.2475	.2463	.2451
580.0	.2439	.2428	.2416	.2404	.2392	.2381	.2369	.2358	.2346	.2335
600.0	.2324	.2312	.2301	.2290	.2279	.2268	.2257	.2246	.2235	.2224
620.0	.2213	.2203	.2192	.2181	.2171	.2160	.2150	.2139	.2129	.2118
640.0	.2108	.2098	.2088	.2078	.2068	.2057	.2047	.2038	.2028	.2018
660.0	.2008	.1998	.1989	.1979	.1969	.1960	.1950	.1941	.1931	.1922
680.0	.1913	.1903	.1894	.1885	.1876	.1867	.1858	.1849	.1840	.1831
700.0	.1822	.1813	.1804	.1795	.1787	.1778	.1769	.1761	.1752	.1744
720.0	.1735	.1727	.1719	.1710	.1702	.1694	.1685	.1677	.1669	.1661
740.0	.1653	.1645	.1637	.1629	.1621	.1613	.1605	.1598	.1590	.1582
760.0	.1574	.1567	.1559	.1552	.1544	.1537	.1529	.1522	.1514	.1507
780.0	.1500	.1492	.1485	.1478	.1471	.1464	.1456	.1449	.1442	.1435

CE - 144

HALF-LIFE 285.00 DAYS CALCULATION INTERVAL 2.0 DAYS

DAYS	DAYS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0
800.0	.1428	.1421	.1415	.1408	.1401	.1394	.1387	.1381	.1374	.1367
820.0	.1361	.1354	.1347	.1341	.1334	.1328	.1321	.1315	.1309	.1302
840.0	.1296	.1290	.1283	.1277	.1271	.1265	.1259	.1253	.1246	.1240
860.0	.1234	.1228	.1222	.1217	.1211	.1205	.1199	.1193	.1187	.1181
880.0	.1176	.1170	.1164	.1159	.1153	.1147	.1142	.1136	.1131	.1125
900.0	.1120	.1114	.1109	.1104	.1098	.1093	.1088	.1082	.1077	.1072
920.0	.1067	.1062	.1056	.1051	.1046	.1041	.1036	.1031	.1026	.1021
940.0	.1016	.1011	.1006	.1001	.0996	.0992	.0987	.0982	.0977	.0973

CS - 132

HALF-LIFE 6.50 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9955	.9911	.9867	.9823	.9780	.9736	.9693	.9650	.9607	.9565	.9522
.50	.9480	.9438	.9396	.9355	.9313	.9272	.9231	.9190	.9149	.9109	.9068	.9028
1.00	.8988	.8948	.8908	.8869	.8830	.8791	.8752	.8713	.8674	.8636	.8597	.8559
1.50	.8521	.8484	.8446	.8408	.8371	.8334	.8297	.8260	.8224	.8187	.8151	.8115
2.00	.8079	.8043	.8007	.7972	.7937	.7901	.7866	.7831	.7797	.7762	.7728	.7693
2.50	.7659	.7625	.7592	.7558	.7524	.7491	.7458	.7425	.7392	.7359	.7326	.7294
3.00	.7262	.7229	.7197	.7165	.7134	.7102	.7071	.7039	.7008	.6977	.6946	.6915
3.50	.6885	.6854	.6824	.6793	.6763	.6733	.6703	.6674	.6644	.6615	.6585	.6556
4.00	.6527	.6498	.6469	.6441	.6412	.6384	.6355	.6327	.6299	.6271	.6243	.6216
4.50	.6188	.6161	.6133	.6106	.6079	.6052	.6025	.5999	.5972	.5946	.5919	.5893
5.00	.5867	.5841	.5815	.5789	.5763	.5738	.5712	.5687	.5662	.5637	.5612	.5587
5.50	.5562	.5538	.5513	.5489	.5464	.5440	.5416	.5392	.5368	.5344	.5320	.5297
6.00	.5273	.5250	.5227	.5204	.5180	.5157	.5135	.5112	.5089	.5067	.5044	.5022
6.50	.5000	.4977	.4955	.4933	.4911	.4890	.4868	.4846	.4825	.4804	.4782	.4761
7.00	.4740	.4719	.4698	.4677	.4656	.4636	.4615	.4595	.4574	.4554	.4534	.4514
7.50	.4494	.4474	.4454	.4434	.4415	.4395	.4376	.4356	.4337	.4318	.4298	.4279
8.00	.4260	.4242	.4223	.4204	.4185	.4167	.4148	.4130	.4112	.4093	.4075	.4057
8.50	.4039	.4021	.4003	.3986	.3968	.3950	.3933	.3915	.3898	.3881	.3864	.3846
9.00	.3829	.3812	.3796	.3779	.3762	.3745	.3729	.3712	.3696	.3679	.3663	.3647
9.50	.3631	.3614	.3598	.3582	.3567	.3551	.3535	.3519	.3504	.3488	.3473	.3457
10.00	.3442	.3427	.3412	.3396	.3381	.3366	.3351	.3337	.3322	.3307	.3292	.3278
10.50	.3263	.3249	.3234	.3220	.3206	.3192	.3177	.3163	.3149	.3135	.3121	.3108
11.00	.3094	.3080	.3066	.3053	.3039	.3026	.3012	.2999	.2986	.2973	.2959	.2946
11.50	.2933	.2920	.2907	.2894	.2881	.2869	.2856	.2843	.2831	.2818	.2806	.2793
12.00	.2781	.2769	.2756	.2744	.2732	.2720	.2708	.2696	.2684	.2672	.2660	.2648
12.50	.2636	.2625	.2613	.2602	.2590	.2578	.2567	.2556	.2544	.2533	.2522	.2511
13.00	.2500	.2488	.2477	.2466	.2455	.2445	.2434	.2423	.2412	.2402	.2391	.2380
13.50	.2370	.2359	.2349	.2338	.2328	.2318	.2307	.2297	.2287	.2277	.2267	.2257
14.00	.2247	.2237	.2227	.2217	.2207	.2197	.2188	.2178	.2168	.2159	.2149	.2139
14.50	.2130	.2121	.2111	.2102	.2092	.2083	.2074	.2065	.2056	.2046	.2037	.2028
15.00	.2019	.2010	.2001	.1993	.1984	.1975	.1966	.1957	.1949	.1940	.1932	.1923
15.50	.1914	.1906	.1898	.1889	.1881	.1872	.1864	.1856	.1848	.1839	.1831	.1823
16.00	.1815	.1807	.1799	.1791	.1783	.1775	.1767	.1759	.1752	.1744	.1736	.1728
16.50	.1721	.1713	.1706	.1698	.1690	.1683	.1676	.1668	.1661	.1653	.1646	.1639
17.00	.1631	.1624	.1617	.1610	.1603	.1596	.1588	.1581	.1574	.1567	.1560	.1554
17.50	.1547	.1540	.1533	.1526	.1519	.1513	.1506	.1499	.1493	.1486	.1479	.1473
18.00	.1466	.1460	.1453	.1447	.1441	.1434	.1428	.1421	.1415	.1409	.1403	.1396
18.50	.1390	.1384	.1378	.1372	.1366	.1360	.1354	.1348	.1342	.1336	.1330	.1324
19.00	.1318	.1312	.1306	.1301	.1295	.1289	.1283	.1278	.1272	.1266	.1261	.1255
19.50	.1250	.1244	.1238	.1233	.1228	.1222	.1217	.1211	.1206	.1201	.1195	.1190
20.00	.1185	.1179	.1174	.1169	.1164	.1159	.1153	.1148	.1143	.1138	.1133	.1128
20.50	.1123	.1118	.1113	.1108	.1103	.1098	.1094	.1089	.1084	.1079	.1074	.1069
21.00	.1065	.1060	.1055	.1051	.1046	.1041	.1037	.1032	.1028	.1023	.1018	.1014
21.50	.1009	.1005	.1001	.0996	.0992	.0987	.0983	.0979	.0974	.0970	.0966	.0961

CS - 134

HALF-LIFE 2.10 YEARS CALCULATION INTERVAL 10.0 DAYS

DAYS	DAYS 0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
0.0	1.0000	.9909	.9820	.9732	.9644	.9557	.9471	.9386	.9302	.9218
100.0	.9135	.9053	.8971	.8890	.8810	.8731	.8652	.8575	.8497	.8421
200.0	.8345	.8270	.8195	.8122	.8049	.7976	.7904	.7833	.7763	.7693
300.0	.7623	.7555	.7487	.7419	.7353	.7286	.7221	.7156	.7091	.7028
400.0	.6964	.6902	.6839	.6778	.6717	.6656	.6596	.6537	.6478	.6420
500.0	.6362	.6305	.6248	.6192	.6136	.6081	.6026	.5972	.5918	.5865
600.0	.5812	.5760	.5708	.5656	.5605	.5555	.5505	.5455	.5406	.5358
700.0	.5309	.5262	.5214	.5167	.5121	.5075	.5029	.4984	.4939	.4894
800.0	.4850	.4807	.4763	.4720	.4678	.4636	.4594	.4553	.4512	.4471
900.0	.4431	.4391	.4351	.4312	.4273	.4235	.4197	.4159	.4122	.4085
1000.0	.4048	.4011	.3975	.3939	.3904	.3869	.3834	.3799	.3765	.3731
1100.0	.3698	.3664	.3631	.3599	.3566	.3534	.3502	.3471	.3440	.3409
1200.0	.3378	.3348	.3317	.3288	.3258	.3229	.3200	.3171	.3142	.3114
1300.0	.3086	.3058	.3031	.3003	.2976	.2949	.2923	.2897	.2870	.2845
1400.0	.2819	.2794	.2768	.2744	.2719	.2694	.2670	.2646	.2622	.2599
1500.0	.2575	.2552	.2529	.2506	.2484	.2461	.2439	.2417	.2395	.2374
1600.0	.2353	.2331	.2310	.2290	.2269	.2249	.2228	.2208	.2188	.2169
1700.0	.2149	.2130	.2111	.2092	.2073	.2054	.2036	.2017	.1999	.1981
1800.0	.1963	.1946	.1928	.1911	.1893	.1876	.1860	.1843	.1826	.1810
1900.0	.1793	.1777	.1761	.1745	.1730	.1714	.1699	.1683	.1668	.1653
2000.0	.1638	.1624	.1609	.1594	.1580	.1566	.1552	.1538	.1524	.1510
2100.0	.1497	.1483	.1470	.1457	.1443	.1430	.1418	.1405	.1392	.1380
2200.0	.1367	.1355	.1343	.1331	.1319	.1307	.1295	.1283	.1272	.1260
2300.0	.1249	.1238	.1227	.1215	.1205	.1194	.1183	.1172	.1162	.1151
2400.0	.1141	.1131	.1120	.1110	.1100	.1090	.1081	.1071	.1061	.1052
2500.0	.1042	.1033	.1024	.1014	.1005	.0996	.0987	.0978	.0969	.0961

CS - 137

HALF-LIFE 30.00 YEARS CALCULATION INTERVAL 1.0 MONTHS

YEARS	MONTHS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9980	.9961	.9942	.9923	.9904	.9885	.9866	.9847	.9828	.9809	.9790
1.00	.9771	.9752	.9734	.9715	.9696	.9677	.9659	.9640	.9622	.9603	.9585	.9566
2.00	.9548	.9530	.9511	.9493	.9475	.9456	.9438	.9420	.9402	.9384	.9366	.9348
3.00	.9330	.9312	.9294	.9276	.9258	.9240	.9223	.9205	.9187	.9170	.9152	.9134
4.00	.9117	.9099	.9082	.9064	.9047	.9029	.9012	.8995	.8977	.8960	.8943	.8926
5.00	.8908	.8891	.8874	.8857	.8840	.8823	.8806	.8789	.8772	.8755	.8739	.8722
6.00	.8705	.8688	.8672	.8655	.8638	.8622	.8605	.8588	.8572	.8555	.8539	.8523
7.00	.8506	.8490	.8473	.8457	.8441	.8425	.8408	.8392	.8376	.8360	.8344	.8328
8.00	.8312	.8296	.8280	.8264	.8248	.8232	.8216	.8201	.8185	.8169	.8153	.8138
9.00	.8122	.8106	.8091	.8075	.8060	.8044	.8029	.8013	.7998	.7982	.7967	.7952
10.00	.7937	.7921	.7906	.7891	.7876	.7860	.7845	.7830	.7815	.7800	.7785	.7770
11.00	.7755	.7740	.7725	.7711	.7696	.7681	.7666	.7651	.7637	.7622	.7607	.7593
12.00	.7578	.7564	.7549	.7534	.7520	.7505	.7491	.7477	.7462	.7448	.7434	.7419
13.00	.7405	.7391	.7377	.7362	.7348	.7334	.7320	.7306	.7292	.7278	.7264	.7250
14.00	.7236	.7222	.7208	.7194	.7180	.7167	.7153	.7139	.7125	.7112	.7098	.7084
15.00	.7071	.7057	.7043	.7030	.7016	.7003	.6989	.6976	.6962	.6949	.6936	.6922
16.00	.6909	.6896	.6883	.6869	.6856	.6843	.6830	.6817	.6803	.6790	.6777	.6764
17.00	.6751	.6738	.6725	.6712	.6699	.6687	.6674	.6661	.6648	.6635	.6622	.6610
18.00	.6597	.6584	.6572	.6559	.6546	.6534	.6521	.6509	.6496	.6484	.6471	.6459
19.00	.6446	.6434	.6422	.6409	.6397	.6385	.6372	.6360	.6348	.6336	.6323	.6311
20.00	.6299	.6287	.6275	.6263	.6251	.6239	.6227	.6215	.6203	.6191	.6179	.6167
21.00	.6155	.6143	.6132	.6120	.6108	.6096	.6085	.6073	.6061	.6049	.6038	.6026
22.00	.6015	.6003	.5992	.5980	.5968	.5957	.5946	.5934	.5923	.5911	.5900	.5889
23.00	.5877	.5866	.5855	.5843	.5832	.5821	.5810	.5799	.5787	.5776	.5765	.5754
24.00	.5743	.5732	.5721	.5710	.5699	.5688	.5677	.5666	.5655	.5644	.5633	.5623
25.00	.5612	.5601	.5590	.5579	.5569	.5558	.5547	.5537	.5526	.5515	.5505	.5494
26.00	.5484	.5473	.5463	.5452	.5442	.5431	.5421	.5410	.5400	.5389	.5379	.5369
27.00	.5358	.5348	.5338	.5328	.5317	.5307	.5297	.5287	.5276	.5266	.5256	.5246
28.00	.5236	.5226	.5216	.5206	.5196	.5186	.5176	.5166	.5156	.5146	.5136	.5126
29.00	.5116	.5107	.5097	.5087	.5077	.5067	.5058	.5048	.5038	.5028	.5019	.5009
30.00	.5000	.4990	.4980	.4971	.4961	.4952	.4942	.4933	.4923	.4914	.4904	.4895
31.00	.4885	.4876	.4867	.4857	.4848	.4838	.4829	.4820	.4811	.4801	.4792	.4783
32.00	.4774	.4765	.4755	.4746	.4737	.4728	.4719	.4710	.4701	.4692	.4683	.4674
33.00	.4665	.4656	.4647	.4638	.4629	.4620	.4611	.4602	.4593	.4585	.4576	.4567
34.00	.4558	.4549	.4541	.4532	.4523	.4514	.4506	.4497	.4488	.4480	.4471	.4463
35.00	.4454	.4445	.4437	.4428	.4420	.4411	.4403	.4394	.4386	.4377	.4369	.4361
36.00	.4352	.4344	.4336	.4327	.4319	.4311	.4302	.4294	.4286	.4277	.4269	.4261
37.00	.4253	.4245	.4236	.4228	.4220	.4212	.4204	.4196	.4188	.4180	.4172	.4164
38.00	.4156	.4148	.4140	.4132	.4124	.4116	.4108	.4100	.4092	.4084	.4076	.4069
39.00	.4061	.4053	.4045	.4037	.4030	.4022	.4014	.4006	.3999	.3991	.3983	.3976

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HALF-LIFE 30.00 YEARS CALCULATION INTERVAL 1.0 MONTHS

YEARS	MONTHS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
40.00	.3968	.3960	.3953	.3945	.3938	.3930	.3922	.3915	.3907	.3900	.3892	.3885
41.00	.3877	.3870	.3862	.3855	.3848	.3840	.3833	.3825	.3818	.3811	.3803	.3796
42.00	.3789	.3782	.3774	.3767	.3760	.3752	.3745	.3738	.3731	.3724	.3717	.3709
43.00	.3702	.3695	.3688	.3681	.3674	.3667	.3660	.3653	.3646	.3639	.3632	.3625
44.00	.3618	.3611	.3604	.3597	.3590	.3583	.3576	.3569	.3562	.3556	.3549	.3542
45.00	.3535	.3528	.3521	.3515	.3508	.3501	.3494	.3488	.3481	.3474	.3468	.3461
46.00	.3454	.3448	.3441	.3434	.3428	.3421	.3415	.3408	.3401	.3395	.3388	.3382
47.00	.3375	.3369	.3362	.3356	.3349	.3343	.3337	.3330	.3324	.3317	.3311	.3305
48.00	.3298	.3292	.3286	.3279	.3273	.3267	.3260	.3254	.3248	.3242	.3235	.3229
49.00	.3223	.3217	.3211	.3204	.3198	.3192	.3186	.3180	.3174	.3168	.3161	.3155
50.00	.3149	.3143	.3137	.3131	.3125	.3119	.3113	.3107	.3101	.3095	.3089	.3083
51.00	.3077	.3071	.3066	.3060	.3054	.3048	.3042	.3036	.3030	.3024	.3019	.3013
52.00	.3007	.3001	.2996	.2990	.2984	.2978	.2973	.2967	.2961	.2955	.2950	.2944
53.00	.2938	.2933	.2927	.2921	.2916	.2910	.2905	.2899	.2893	.2888	.2882	.2877
54.00	.2871	.2866	.2860	.2855	.2849	.2844	.2838	.2833	.2827	.2822	.2816	.2811
55.00	.2806	.2800	.2795	.2790	.2784	.2779	.2773	.2768	.2763	.2757	.2752	.2747
56.00	.2742	.2736	.2731	.2726	.2721	.2715	.2710	.2705	.2700	.2694	.2689	.2684
57.00	.2679	.2674	.2669	.2664	.2658	.2653	.2648	.2643	.2638	.2633	.2628	.2623
58.00	.2618	.2613	.2608	.2603	.2598	.2593	.2588	.2583	.2578	.2573	.2568	.2563
59.00	.2558	.2553	.2548	.2543	.2538	.2533	.2529	.2524	.2519	.2514	.2509	.2504
60.00	.2500	.2495	.2490	.2485	.2480	.2476	.2471	.2466	.2461	.2457	.2452	.2447
61.00	.2442	.2438	.2433	.2428	.2424	.2419	.2414	.2410	.2405	.2400	.2396	.2391
62.00	.2387	.2382	.2377	.2373	.2368	.2364	.2359	.2355	.2350	.2346	.2341	.2337
63.00	.2332	.2328	.2323	.2319	.2314	.2310	.2305	.2301	.2296	.2292	.2288	.2283
64.00	.2279	.2274	.2270	.2266	.2261	.2257	.2253	.2248	.2244	.2240	.2235	.2231
65.00	.2227	.2222	.2218	.2214	.2210	.2205	.2201	.2197	.2193	.2188	.2184	.2180
66.00	.2176	.2172	.2168	.2163	.2159	.2155	.2151	.2147	.2143	.2138	.2134	.2130
67.00	.2126	.2122	.2118	.2114	.2110	.2106	.2102	.2098	.2094	.2090	.2086	.2082
68.00	.2078	.2074	.2070	.2066	.2062	.2058	.2054	.2050	.2046	.2042	.2038	.2034
69.00	.2030	.2026	.2022	.2018	.2015	.2011	.2007	.2003	.1999	.1995	.1991	.1988
70.00	.1984	.1980	.1976	.1972	.1969	.1965	.1961	.1957	.1953	.1950	.1946	.1942
71.00	.1938	.1935	.1931	.1927	.1924	.1920	.1916	.1912	.1909	.1905	.1901	.1898
72.00	.1894	.1891	.1887	.1883	.1880	.1876	.1872	.1869	.1865	.1862	.1858	.1854
73.00	.1851	.1847	.1844	.1840	.1837	.1833	.1830	.1826	.1823	.1819	.1816	.1812
74.00	.1809	.1805	.1802	.1798	.1795	.1791	.1788	.1784	.1781	.1778	.1774	.1771
75.00	.1767	.1764	.1760	.1757	.1754	.1750	.1747	.1744	.1740	.1737	.1734	.1730
76.00	.1727	.1724	.1720	.1717	.1714	.1710	.1707	.1704	.1700	.1697	.1694	.1691
77.00	.1687	.1684	.1681	.1678	.1674	.1671	.1668	.1665	.1662	.1658	.1655	.1652
78.00	.1649	.1646	.1643	.1639	.1636	.1633	.1630	.1627	.1624	.1621	.1617	.1614
79.00	.1611	.1608	.1605	.1602	.1599	.1596	.1593	.1590	.1587	.1584	.1580	.1577

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HALF-LIFE 27.80 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
0.00	1.0000	.9937	.9876	.9814	.9753	.9693	.9632	.9573	.9513	.9454	.9395	.9337
3.00	.9279	.9221	.9164	.9107	.9050	.8994	.8938	.8883	.8827	.8773	.8718	.8664
6.00	.8610	.8557	.8503	.8451	.8398	.8346	.8294	.8242	.8191	.8140	.8090	.8039
9.00	.7989	.7940	.7890	.7841	.7793	.7744	.7696	.7648	.7601	.7554	.7507	.7460
12.00	.7414	.7368	.7322	.7276	.7231	.7186	.7141	.7097	.7053	.7009	.6966	.6922
15.00	.6879	.6837	.6794	.6752	.6710	.6668	.6627	.6586	.6545	.6504	.6464	.6423
18.00	.6383	.6344	.6304	.6265	.6226	.6188	.6149	.6111	.6073	.6035	.5998	.5960
21.00	.5923	.5887	.5850	.5814	.5777	.5742	.5706	.5670	.5635	.5600	.5565	.5531
24.00	.5496	.5462	.5428	.5395	.5361	.5328	.5295	.5262	.5229	.5197	.5164	.5132
27.00	.5100	.5069	.5037	.5006	.4975	.4944	.4913	.4882	.4852	.4822	.4792	.4762
30.00	.4733	.4703	.4674	.4645	.4616	.4587	.4559	.4531	.4502	.4474	.4447	.4419
33.00	.4391	.4364	.4337	.4310	.4283	.4257	.4230	.4204	.4178	.4152	.4126	.4100
36.00	.4075	.4050	.4024	.3999	.3975	.3950	.3925	.3901	.3877	.3853	.3829	.3805
39.00	.3781	.3758	.3734	.3711	.3688	.3665	.3642	.3620	.3597	.3575	.3553	.3531
42.00	.3509	.3487	.3465	.3444	.3422	.3401	.3380	.3359	.3338	.3317	.3297	.3276
45.00	.3256	.3236	.3215	.3195	.3176	.3156	.3136	.3117	.3097	.3078	.3059	.3040
48.00	.3021	.3002	.2984	.2965	.2947	.2928	.2910	.2892	.2874	.2856	.2838	.2821
51.00	.2803	.2786	.2769	.2751	.2734	.2717	.2700	.2684	.2667	.2650	.2634	.2618
54.00	.2601	.2585	.2569	.2553	.2537	.2521	.2506	.2490	.2475	.2459	.2444	.2429
57.00	.2414	.2399	.2384	.2369	.2354	.2340	.2325	.2311	.2296	.2282	.2268	.2254
60.00	.2240	.2226	.2212	.2198	.2185	.2171	.2158	.2144	.2131	.2118	.2104	.2091
63.00	.2078	.2065	.2053	.2040	.2027	.2014	.2002	.1990	.1977	.1965	.1953	.1941
66.00	.1928	.1916	.1905	.1893	.1881	.1869	.1858	.1846	.1835	.1823	.1812	.1801
69.00	.1789	.1778	.1767	.1756	.1745	.1735	.1724	.1713	.1702	.1692	.1681	.1671
72.00	.1660	.1650	.1640	.1630	.1620	.1609	.1599	.1590	.1580	.1570	.1560	.1550
75.00	.1541	.1531	.1522	.1512	.1503	.1493	.1484	.1475	.1466	.1457	.1448	.1439
78.00	.1430	.1421	.1412	.1403	.1394	.1386	.1377	.1369	.1360	.1352	.1343	.1335
81.00	.1327	.1318	.1310	.1302	.1294	.1286	.1278	.1270	.1262	.1254	.1246	.1239
84.00	.1231	.1223	.1216	.1208	.1201	.1193	.1186	.1178	.1171	.1164	.1157	.1149
87.00	.1142	.1135	.1128	.1121	.1114	.1107	.1100	.1093	.1087	.1080	.1073	.1066
90.00	.1060	.1053	.1047	.1040	.1034	.1027	.1021	.1015	.1008	.1002	.0996	.0990
93.00	.0983	.0977	.0971	.0965	.0959	.0953	.0947	.0941	.0936	.0930	.0924	.0918
96.00	.0913	.0907	.0901	.0896	.0890	.0884	.0879	.0874	.0868	.0863	.0857	.0852
99.00	.0847	.0841	.0836	.0831	.0826	.0821	.0816	.0811	.0805	.0800	.0796	.0791
102.00	.0786	.0781	.0776	.0771	.0766	.0762	.0757	.0752	.0747	.0743	.0738	.0734
105.00	.0729	.0724	.0720	.0715	.0711	.0707	.0702	.0698	.0693	.0689	.0685	.0681
108.00	.0676	.0672	.0668	.0664	.0660	.0656	.0652	.0648	.0643	.0639	.0636	.0632
111.00	.0628	.0624	.0620	.0616	.0612	.0608	.0605	.0601	.0597	.0593	.0590	.0586
114.00	.0582	.0579	.0575	.0572	.0568	.0564	.0561	.0557	.0554	.0551	.0547	.0544
117.00	.0540	.0537	.0534	.0530	.0527	.0524	.0520	.0517	.0514	.0511	.0508	.0505

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HALF-LIFE 27.80 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
120.00	.0501	.0498	.0495	.0492	.0489	.0486	.0483	.0480	.0477	.0474	.0471	.0468
123.00	.0465	.0462	.0459	.0457	.0454	.0451	.0448	.0445	.0443	.0440	.0437	.0434
126.00	.0432	.0429	.0426	.0424	.0421	.0418	.0416	.0413	.0411	.0408	.0406	.0403
129.00	.0400	.0398	.0396	.0393	.0391	.0388	.0386	.0383	.0381	.0379	.0376	.0374
132.00	.0372	.0369	.0367	.0365	.0362	.0360	.0358	.0356	.0353	.0351	.0349	.0347
135.00	.0345	.0343	.0340	.0338	.0336	.0334	.0332	.0330	.0328	.0326	.0324	.0322
138.00	.0320	.0318	.0316	.0314	.0312	.0310	.0308	.0306	.0304	.0302	.0301	.0299
141.00	.0297	.0295	.0293	.0291	.0289	.0288	.0286	.0284	.0282	.0281	.0279	.0277
144.00	.0275	.0274	.0272	.0270	.0269	.0267	.0265	.0264	.0262	.0260	.0259	.0257
147.00	.0255	.0254	.0252	.0251	.0249	.0248	.0246	.0245	.0243	.0242	.0240	.0239
150.00	.0237	.0236	.0234	.0233	.0231	.0230	.0228	.0227	.0225	.0224	.0223	.0221
153.00	.0220	.0219	.0217	.0216	.0214	.0213	.0212	.0211	.0209	.0208	.0207	.0205
156.00	.0204	.0203	.0202	.0200	.0199	.0198	.0197	.0195	.0194	.0193	.0192	.0190
159.00	.0189	.0188	.0187	.0186	.0185	.0183	.0182	.0181	.0180	.0179	.0178	.0177
162.00	.0176	.0175	.0173	.0172	.0171	.0170	.0169	.0168	.0167	.0166	.0165	.0164
165.00	.0163	.0162	.0161	.0160	.0159	.0158	.0157	.0156	.0155	.0154	.0153	.0152
168.00	.0151	.0150	.0149	.0148	.0147	.0146	.0146	.0145	.0144	.0143	.0142	.0141
171.00	.0140	.0139	.0138	.0138	.0137	.0136	.0135	.0134	.0133	.0133	.0132	.0131
174.00	.0130	.0129	.0128	.0128	.0127	.0126	.0125	.0124	.0124	.0123	.0122	.0121
177.00	.0121	.0120	.0119	.0118	.0118	.0117	.0116	.0115	.0115	.0114	.0113	.0113
180.00	.0112	.0111	.0111	.0110	.0109	.0108	.0108	.0107	.0106	.0106	.0105	.0104
183.00	.0104	.0103	.0103	.0102	.0101	.0101	.0100	.0099	.0099	.0098	.0098	.0097

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HALF-LIFE 267.00 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	1.0000	.9974	.9948	.9922	.9896	.9871	.9845	.9819	.9794	.9769
10.0	.9743	.9718	.9693	.9668	.9643	.9618	.9593	.9568	.9543	.9518
20.0	.9494	.9469	.9444	.9420	.9395	.9371	.9347	.9323	.9298	.9274
30.0	.9250	.9226	.9202	.9178	.9155	.9131	.9107	.9084	.9060	.9037
40.0	.9013	.8990	.8966	.8943	.8920	.8897	.8874	.8851	.8828	.8805
50.0	.8782	.8759	.8737	.8714	.8691	.8669	.8646	.8624	.8602	.8579
60.0	.8557	.8535	.8513	.8491	.8469	.8447	.8425	.8403	.8381	.8359
70.0	.8338	.8316	.8295	.8273	.8252	.8230	.8209	.8188	.8166	.8145
80.0	.8124	.8103	.8082	.8061	.8040	.8019	.7999	.7978	.7957	.7937
90.0	.7916	.7895	.7875	.7855	.7834	.7814	.7794	.7773	.7753	.7733
100.0	.7713	.7693	.7673	.7653	.7633	.7614	.7594	.7574	.7555	.7535
110.0	.7515	.7496	.7476	.7457	.7438	.7418	.7399	.7380	.7361	.7342
120.0	.7323	.7304	.7285	.7266	.7247	.7228	.7210	.7191	.7172	.7154
130.0	.7135	.7117	.7098	.7080	.7061	.7043	.7025	.7007	.6988	.6970
140.0	.6952	.6934	.6916	.6898	.6880	.6863	.6845	.6827	.6809	.6792
150.0	.6774	.6757	.6739	.6722	.6704	.6687	.6669	.6652	.6635	.6618
160.0	.6600	.6583	.6566	.6549	.6532	.6515	.6498	.6482	.6465	.6448
170.0	.6431	.6415	.6398	.6381	.6365	.6348	.6332	.6315	.6299	.6283
180.0	.6266	.6250	.6234	.6218	.6202	.6186	.6170	.6154	.6138	.6122
190.0	.6106	.6090	.6074	.6059	.6043	.6027	.6012	.5996	.5980	.5965
200.0	.5949	.5934	.5919	.5903	.5888	.5873	.5857	.5842	.5827	.5812
210.0	.5797	.5782	.5767	.5752	.5737	.5722	.5707	.5693	.5678	.5663
220.0	.5648	.5634	.5619	.5605	.5590	.5576	.5561	.5547	.5532	.5518
230.0	.5504	.5489	.5475	.5461	.5447	.5433	.5419	.5404	.5390	.5376
240.0	.5363	.5349	.5335	.5321	.5307	.5293	.5280	.5266	.5252	.5239
250.0	.5225	.5212	.5198	.5185	.5171	.5158	.5144	.5131	.5118	.5104
260.0	.5091	.5078	.5065	.5052	.5039	.5026	.5012	.5000	.4987	.4974
270.0	.4961	.4948	.4935	.4922	.4909	.4897	.4884	.4871	.4859	.4846
280.0	.4834	.4821	.4809	.4796	.4784	.4771	.4759	.4747	.4734	.4722
290.0	.4710	.4697	.4685	.4673	.4661	.4649	.4637	.4625	.4613	.4601
300.0	.4589	.4577	.4565	.4553	.4542	.4530	.4518	.4506	.4495	.4483
310.0	.4471	.4460	.4448	.4437	.4425	.4414	.4402	.4391	.4379	.4368
320.0	.4357	.4345	.4334	.4323	.4312	.4301	.4289	.4278	.4267	.4256
330.0	.4245	.4234	.4223	.4212	.4201	.4190	.4179	.4169	.4158	.4147
340.0	.4136	.4126	.4115	.4104	.4094	.4083	.4072	.4062	.4051	.4041
350.0	.4030	.4020	.4009	.3999	.3989	.3978	.3968	.3958	.3947	.3937
360.0	.3927	.3917	.3907	.3897	.3886	.3876	.3866	.3856	.3846	.3836
370.0	.3826	.3816	.3807	.3797	.3787	.3777	.3767	.3757	.3748	.3738
380.0	.3728	.3719	.3709	.3699	.3690	.3680	.3671	.3661	.3652	.3642
390.0	.3633	.3623	.3614	.3605	.3595	.3586	.3577	.3567	.3558	.3549
400.0	.3540	.3530	.3521	.3512	.3503	.3494	.3485	.3476	.3467	.3458
410.0	.3449	.3440	.3431	.3422	.3413	.3404	.3396	.3387	.3378	.3369
420.0	.3361	.3352	.3343	.3334	.3326	.3317	.3309	.3300	.3291	.3283
430.0	.3274	.3266	.3257	.3249	.3241	.3232	.3224	.3215	.3207	.3199
440.0	.3190	.3182	.3174	.3166	.3157	.3149	.3141	.3133	.3125	.3117

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HALF-LIFE 267.00 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
450.0	.3109	.3101	.3093	.3085	.3077	.3069	.3061	.3053	.3045	.3037
460.0	.3029	.3021	.3013	.3006	.2998	.2990	.2982	.2974	.2967	.2959
470.0	.2951	.2944	.2936	.2928	.2921	.2913	.2906	.2898	.2891	.2883
480.0	.2876	.2868	.2861	.2853	.2846	.2839	.2831	.2824	.2817	.2809
490.0	.2802	.2795	.2788	.2780	.2773	.2766	.2759	.2752	.2744	.2737
500.0	.2730	.2723	.2716	.2709	.2702	.2695	.2688	.2681	.2674	.2667
510.0	.2660	.2653	.2646	.2640	.2633	.2626	.2619	.2612	.2606	.2599
520.0	.2592	.2585	.2579	.2572	.2565	.2559	.2552	.2545	.2539	.2532
530.0	.2526	.2519	.2513	.2506	.2500	.2493	.2487	.2480	.2474	.2467
540.0	.2461	.2454	.2448	.2442	.2435	.2429	.2423	.2417	.2410	.2404
550.0	.2398	.2392	.2385	.2379	.2373	.2367	.2361	.2355	.2348	.2342
560.0	.2336	.2330	.2324	.2318	.2312	.2306	.2300	.2294	.2288	.2282
570.0	.2276	.2271	.2265	.2259	.2253	.2247	.2241	.2235	.2230	.2224
580.0	.2218	.2212	.2207	.2201	.2195	.2189	.2184	.2178	.2172	.2167
590.0	.2161	.2156	.2150	.2144	.2139	.2133	.2128	.2122	.2117	.2111
600.0	.2106	.2100	.2095	.2089	.2084	.2079	.2073	.2068	.2063	.2057
610.0	.2052	.2047	.2041	.2036	.2031	.2025	.2020	.2015	.2010	.2004
620.0	.1999	.1994	.1989	.1984	.1979	.1973	.1968	.1963	.1958	.1953
630.0	.1948	.1943	.1938	.1933	.1928	.1923	.1918	.1913	.1908	.1903
640.0	.1898	.1893	.1888	.1883	.1878	.1874	.1869	.1864	.1859	.1854
650.0	.1849	.1845	.1840	.1835	.1830	.1826	.1821	.1816	.1811	.1807
660.0	.1802	.1797	.1793	.1788	.1783	.1779	.1774	.1770	.1765	.1760
670.0	.1756	.1751	.1747	.1742	.1738	.1733	.1729	.1724	.1720	.1715
680.0	.1711	.1706	.1702	.1698	.1693	.1689	.1684	.1680	.1676	.1671
690.0	.1667	.1663	.1658	.1654	.1650	.1645	.1641	.1637	.1633	.1628
700.0	.1624	.1620	.1616	.1612	.1607	.160	.1599	.1595	.1591	.1587
710.0	.1583	.1578	.1574	.1570	.1566	.1562	.1558	.1554	.1550	.1546
720.0	.1542	.1538	.1534	.1530	.1526	.1522	.1518	.1514	.1510	.1506
730.0	.1503	.1499	.1495	.1491	.1487	.1483	.1479	.1475	.1472	.1468
740.0	.1464	.1460	.1456	.1453	.1449	.1445	.1441	.1438	.1434	.1430
750.0	.1426	.1423	.1419	.1415	.1412	.1408	.1404	.1401	.1397	.1394
760.0	.1390	.1386	.1383	.1379	.1376	.1372	.1368	.1365	.1361	.1358
770.0	.1354	.1351	.1347	.1344	.1340	.1337	.1333	.1330	.1326	.1323
780.0	.1320	.1316	.1313	.1309	.1306	.1303	.1299	.1296	.1292	.1289
790.0	.1286	.1282	.1279	.1276	.1272	.1269	.1266	.1263	.1259	.1256
800.0	.1253	.1250	.1246	.1243	.1240	.1237	.1233	.1230	.1227	.1224
810.0	.1221	.1217	.1214	.1211	.1208	.1205	.1202	.1199	.1196	.1192
820.0	.1189	.1186	.1183	.1180	.1177	.1174	.1171	.1168	.1165	.1162
830.0	.1159	.1156	.1153	.1150	.1147	.1144	.1141	.1138	.1135	.1132
840.0	.1129	.1126	.1123	.1120	.1117	.1115	.1112	.1109	.1106	.1103
850.0	.1100	.1097	.1094	.1092	.1089	.1086	.1083	.1080	.1078	.1075
860.0	.1072	.1069	.1066	.1064	.1061	.1058	.1055	.1053	.1050	.1047
870.0	.1044	.1042	.1039	.1036	.1034	.1031	.1028	.1026	.1023	.1020
880.0	.1018	.1015	.1012	.1010	.1007	.1005	.1002	.0999	.0997	.0994

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HALF-LIFE 72.00 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
0.00	1.0000	.9967	.9936	.9904	.9872	.9840	.9809	.9777	.9746	.9715	.9684	.9653
4.00	.9622	.9591	.9560	.9530	.9499	.9469	.9438	.9408	.9378	.9348	.9318	.9288
8.00	.9258	.9229	.9199	.9170	.9140	.9111	.9082	.9053	.9024	.8995	.8966	.8937
12.00	.8908	.8880	.8851	.8823	.8795	.8767	.8739	.8711	.8683	.8655	.8627	.8599
16.00	.8572	.8544	.8517	.8490	.8463	.8435	.8408	.8382	.8355	.8328	.8301	.8275
20.00	.8248	.8222	.8195	.8169	.8143	.8117	.8091	.8065	.8039	.8013	.7988	.7962
24.00	.7937	.7911	.7886	.7860	.7835	.7810	.7785	.7760	.7735	.7711	.7686	.7661
28.00	.7637	.7612	.7588	.7564	.7539	.7515	.7491	.7467	.7443	.7419	.7395	.7372
32.00	.7348	.7325	.7301	.7278	.7254	.7231	.7208	.7185	.7162	.7139	.7116	.7093
36.00	.7071	.7048	.7025	.7003	.6980	.6958	.6936	.6914	.6891	.6869	.6847	.6825
40.00	.6803	.6782	.6760	.6738	.6717	.6695	.6674	.6652	.6631	.6610	.6589	.6567
44.00	.6546	.6525	.6505	.6484	.6463	.6442	.6422	.6401	.6380	.6360	.6340	.6319
48.00	.6299	.6279	.6259	.6239	.6219	.6199	.6179	.6159	.6139	.6120	.6100	.6081
52.00	.6061	.6042	.6022	.6003	.5984	.5965	.5946	.5926	.5907	.5889	.5870	.5851
56.00	.5832	.5813	.5795	.5776	.5758	.5739	.5721	.5703	.5684	.5666	.5648	.5630
60.00	.5612	.5594	.5576	.5558	.5540	.5522	.5505	.5487	.5470	.5452	.5435	.5417
64.00	.5400	.5382	.5365	.5348	.5331	.5314	.5297	.5280	.5263	.5246	.5229	.5213
68.00	.5196	.5179	.5163	.5146	.5130	.5113	.5097	.5080	.5064	.5048	.5032	.5016
72.00	.5000	.4983	.4968	.4952	.4936	.4920	.4904	.4888	.4873	.4857	.4842	.4826
76.00	.4811	.4795	.4780	.4765	.4749	.4734	.4719	.4704	.4689	.4674	.4659	.4644
80.00	.4629	.4614	.4599	.4585	.4570	.4555	.4541	.4526	.4512	.4497	.4483	.4468
84.00	.4454	.4440	.4425	.4411	.4397	.4383	.4369	.4355	.4341	.4327	.4313	.4299
88.00	.4286	.4272	.4258	.4245	.4231	.4217	.4204	.4191	.4177	.4164	.4150	.4137
92.00	.4124	.4111	.4097	.4084	.4071	.4058	.4045	.4032	.4019	.4006	.3994	.3981
96.00	.3968	.3955	.3943	.3930	.3917	.3905	.3892	.3880	.3867	.3855	.3843	.3830
100.00	.3818	.3806	.3794	.3782	.3769	.3757	.3745	.3733	.3721	.3709	.3697	.3686
104.00	.3674	.3662	.3650	.3639	.3627	.3615	.3604	.3592	.3581	.3569	.3558	.3546
108.00	.3535	.3524	.3512	.3501	.3490	.3479	.3468	.3457	.3445	.3434	.3423	.3412
112.00	.3401	.3391	.3380	.3369	.3358	.3347	.3337	.3326	.3315	.3305	.3294	.3283
116.00	.3273	.3262	.3252	.3242	.3231	.3221	.3211	.3200	.3190	.3180	.3170	.3159
120.00	.3149	.3139	.3129	.3119	.3109	.3099	.3089	.3079	.3069	.3060	.3050	.3040
124.00	.3030	.3021	.3011	.3001	.2992	.2982	.2973	.2963	.2954	.2944	.2935	.2925
128.00	.2916	.2906	.2897	.2888	.2879	.2869	.2860	.2851	.2842	.2833	.2824	.2815
132.00	.2806	.2797	.2788	.2779	.2770	.2761	.2752	.2743	.2735	.2726	.2717	.2708
136.00	.2700	.2691	.2682	.2674	.2665	.2657	.2648	.2640	.2631	.2623	.2614	.2606
140.00	.2598	.2589	.2581	.2573	.2565	.2556	.2548	.2540	.2532	.2524	.2516	.2508
144.00	.2500	.2492	.2484	.2476	.2468	.2460	.2452	.2444	.2436	.2428	.2421	.2413
148.00	.2405	.2397	.2390	.2382	.2374	.2367	.2359	.2352	.2344	.2337	.2329	.2322
152.00	.2314	.2307	.2299	.2292	.2285	.2277	.2270	.2263	.2256	.2248	.2241	.2234
156.00	.2227	.2220	.2213	.2205	.2198	.2191	.2184	.2177	.2170	.2163	.2156	.2150

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HALF-LIFE 72.00 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
160.00	.2143	.2136	.2129	.2122	.2115	.2109	.2102	.2095	.2088	.2082	.2075	.2068
164.00	.2062	.2055	.2048	.2042	.2035	.2029	.2022	.2016	.2009	.2003	.1997	.1990
168.00	.1984	.1977	.1971	.1965	.1958	.1952	.1946	.1940	.1933	.1927	.1921	.1915
172.00	.1909	.1903	.1897	.1891	.1884	.1878	.1872	.1866	.1860	.1854	.1849	.1843
176.00	.1837	.1831	.1825	.1819	.1813	.1807	.1802	.1796	.1790	.1784	.1779	.1773
180.00	.1767	.1762	.1756	.1750	.1745	.1739	.1734	.1728	.1722	.1717	.1711	.1706
184.00	.1701	.1695	.1690	.1684	.1679	.1673	.1668	.1663	.1657	.1652	.1647	.1642
188.00	.1636	.1631	.1626	.1621	.1615	.1610	.1605	.1600	.1595	.1590	.1585	.1579
192.00	.1574	.1569	.1564	.1559	.1554	.1549	.1544	.1539	.1535	.1530	.1525	.1520
196.00	.1515	.1510	.1505	.1500	.1496	.1491	.1486	.1481	.1477	.1472	.1467	.1462
200.00	.1458	.1453	.1448	.1444	.1439	.1434	.1430	.1425	.1421	.1416	.1412	.1407
204.00	.1403	.1398	.1394	.1389	.1385	.1380	.1376	.1371	.1367	.1363	.1358	.1354
208.00	.1350	.1345	.1341	.1337	.1332	.1328	.1324	.1320	.1315	.1311	.1307	.1303
212.00	.1299	.1294	.1290	.1286	.1282	.1278	.1274	.1270	.1266	.1262	.1258	.1254
216.00	.1250	.1246	.1242	.1238	.1234	.1230	.1226	.1222	.1218	.1214	.1210	.1206
220.00	.1202	.1198	.1195	.1191	.1187	.1183	.1179	.1176	.1172	.1168	.1164	.1161
224.00	.1157	.1153	.1149	.1146	.1142	.1138	.1135	.1131	.1128	.1124	.1120	.1117
228.00	.1113	.1110	.1106	.1102	.1099	.1095	.1092	.1088	.1085	.1081	.1078	.1075
232.00	.1071	.1068	.1064	.1061	.1057	.1054	.1051	.1047	.1044	.1041	.1037	.1034
236.00	.1031	.1027	.1024	.1021	.1017	.1014	.1011	.1008	.1004	.1001	.0998	.0995

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HALF-LIFE 5.24 YEARS CALCULATION INTERVAL 15.0 DAYS

DAYS	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
0.0	1.0000	.9945	.9891	.9838	.9784	.9731	.9679	.9626	.9574	.9522
150.0	.9470	.9419	.9368	.9317	.9267	.9216	.9166	.9117	.9067	.9018
300.0	.8969	.8921	.8872	.8824	.8776	.8729	.8681	.8634	.8588	.8541
450.0	.8495	.8449	.8403	.8357	.8312	.8267	.8222	.8177	.8133	.8089
600.0	.8045	.8002	.7958	.7915	.7872	.7829	.7787	.7745	.7703	.7661
750.0	.7620	.7578	.7537	.7496	.7456	.7415	.7375	.7335	.7295	.7256
900.0	.7216	.7177	.7138	.7100	.7061	.7023	.6985	.6947	.6909	.6872
1050.0	.6834	.6797	.6761	.6724	.6687	.6651	.6615	.6579	.6544	.6508
1200.0	.6473	.6438	.6403	.6368	.6334	.6299	.6265	.6231	.6197	.6164
1350.0	.6130	.6097	.6064	.6031	.5998	.5966	.5934	.5901	.5869	.5838
1500.0	.5806	.5774	.5743	.5712	.5681	.5650	.5620	.5589	.5559	.5529
1650.0	.5499	.5469	.5439	.5410	.5380	.5351	.5322	.5293	.5265	.5236
1800.0	.5208	.5180	.5151	.5124	.5096	.5068	.5041	.5013	.4986	.4959
1950.0	.4932	.4905	.4879	.4852	.4826	.4800	.4774	.4748	.4722	.4697
2100.0	.4671	.4646	.4621	.4596	.4571	.4546	.4521	.4497	.4472	.4448
2250.0	.4424	.4400	.4376	.4352	.4329	.4305	.4282	.4259	.4236	.4213
2400.0	.4190	.4167	.4145	.4122	.4100	.4078	.4055	.4033	.4012	.3990
2550.0	.3968	.3947	.3925	.3904	.3883	.3862	.3841	.3820	.3799	.3779
2700.0	.3758	.3738	.3718	.3697	.3677	.3657	.3638	.3618	.3598	.3579
2850.0	.3559	.3540	.3521	.3502	.3483	.3464	.3445	.3426	.3408	.3389
3000.0	.3371	.3353	.3335	.3316	.3298	.3281	.3263	.3245	.3228	.3210
3150.0	.3193	.3175	.3158	.3141	.3124	.3107	.3090	.3073	.3057	.3040
3300.0	.3024	.3007	.2991	.2975	.2959	.2943	.2927	.2911	.2895	.2879
3450.0	.2864	.2848	.2833	.2817	.2802	.2787	.2772	.2757	.2742	.2727
3600.0	.2712	.2697	.2683	.2668	.2654	.2639	.2625	.2611	.2597	.2583
3750.0	.2569	.2555	.2541	.2527	.2513	.2500	.2486	.2473	.2459	.2446
3900.0	.2433	.2419	.2406	.2393	.2380	.2367	.2355	.2342	.2329	.2316
4050.0	.2304	.2291	.2279	.2267	.2254	.2242	.2230	.2218	.2206	.2194
4200.0	.2182	.2170	.2158	.2147	.2135	.2123	.2112	.2101	.2089	.2078
4350.0	.2067	.2055	.2044	.2033	.2022	.2011	.2000	.1989	.1979	.1968
4500.0	.1957	.1947	.1936	.1925	.1915	.1905	.1894	.1884	.1874	.1864
4650.0	.1854	.1844	.1834	.1824	.1814	.1804	.1794	.1784	.1775	.1765
4800.0	.1755	.1746	.1736	.1727	.1718	.1708	.1699	.1690	.1681	.1672
4950.0	.1663	.1654	.1645	.1636	.1627	.1618	.1609	.1600	.1592	.1583
5100.0	.1575	.1566	.1558	.1549	.1541	.1532	.1524	.1516	.1508	.1499
5250.0	.1491	.1483	.1475	.1467	.1459	.1451	.1443	.1436	.1428	.1420
5400.0	.1412	.1405	.1397	.1389	.1382	.1374	.1367	.1360	.1352	.1345
5550.0	.1338	.1330	.1323	.1316	.1309	.1302	.1295	.1288	.1281	.1274
5700.0	.1267	.1260	.1253	.1246	.1240	.1233	.1226	.1219	.1213	.1206
5850.0	.1200	.1193	.1187	.1180	.1174	.1168	.1161	.1155	.1149	.1142
6000.0	.1136	.1130	.1124	.1118	.1112	.1106	.1100	.1094	.1088	.1082
6150.0	.1076	.1070	.1064	.1059	.1053	.1047	.1042	.1036	.1030	.1025
6300.0	.1019	.1014	.1008	.1003	.0997	.0992	.0986	.0981	.0976	.0970

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HALF-LIFE 12.90 HOURS CALCULATION INTERVAL 5.0 MINUTES

HOURS	MINUTES 0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0
0.00	1.0000	.9955	.9910	.9866	.9822	.9778	.9734	.9691	.9648	.9605	.9562	.9519
1.00	.9476	.9434	.9392	.9350	.9308	.9267	.9225	.9184	.9143	.9102	.9061	.9021
2.00	.8981	.8940	.8901	.8861	.8821	.8782	.8743	.8703	.8665	.8626	.8587	.8549
3.00	.8511	.8473	.8435	.8397	.8360	.8322	.8285	.8248	.8211	.8175	.8138	.8102
4.00	.8065	.8029	.7994	.7958	.7922	.7887	.7852	.7817	.7782	.7747	.7712	.7678
5.00	.7644	.7609	.7575	.7542	.7508	.7474	.7441	.7408	.7375	.7342	.7309	.7276
6.00	.7244	.7211	.7179	.7147	.7115	.7083	.7052	.7020	.6989	.6957	.6926	.6895
7.00	.6865	.6834	.6803	.6773	.6743	.6713	.6683	.6653	.6623	.6593	.6564	.6535
8.00	.6506	.6476	.6448	.6419	.6390	.6361	.6333	.6305	.6277	.6249	.6221	.6193
9.00	.6165	.6138	.6110	.6083	.6056	.6029	.6002	.5975	.5948	.5922	.5895	.5869
10.00	.5843	.5816	.5791	.5765	.5739	.5713	.5688	.5662	.5637	.5612	.5587	.5562
11.00	.5537	.5512	.5488	.5463	.5439	.5414	.5390	.5366	.5342	.5318	.5294	.5271
12.00	.5247	.5224	.5200	.5177	.5154	.5131	.5108	.5085	.5063	.5040	.5017	.4995
13.00	.4973	.4950	.4928	.4906	.4884	.4863	.4841	.4819	.4798	.4776	.4755	.4734
14.00	.4713	.4691	.4671	.4650	.4629	.4608	.4588	.4567	.4547	.4526	.4506	.4486
15.00	.4466	.4446	.4426	.4406	.4387	.4367	.4348	.4328	.4309	.4290	.4270	.4251
16.00	.4232	.4213	.4195	.4176	.4157	.4139	.4120	.4102	.4083	.4065	.4047	.4029
17.00	.4011	.3993	.3975	.3957	.3940	.3922	.3905	.3887	.3870	.3852	.3835	.3818
18.00	.3801	.3784	.3767	.3750	.3734	.3717	.3700	.3684	.3667	.3651	.3635	.3618
19.00	.3602	.3586	.3570	.3554	.3538	.3522	.3507	.3491	.3475	.3460	.3444	.3429
20.00	.3414	.3398	.3383	.3368	.3353	.3338	.3323	.3308	.3294	.3279	.3264	.3250
21.00	.3235	.3221	.3206	.3192	.3178	.3163	.3149	.3135	.3121	.3107	.3093	.3080
22.00	.3066	.3052	.3038	.3025	.3011	.2998	.2985	.2971	.2958	.2945	.2932	.2918
23.00	.2905	.2892	.2879	.2867	.2854	.2841	.2828	.2816	.2803	.2791	.2778	.2766
24.00	.2753	.2741	.2729	.2717	.2704	.2692	.2680	.2668	.2656	.2645	.2633	.2621
25.00	.2609	.2598	.2586	.2574	.2563	.2552	.2540	.2529	.2517	.2506	.2495	.2484
26.00	.2473	.2462	.2451	.2440	.2429	.2418	.2407	.2396	.2386	.2375	.2364	.2354
27.00	.2343	.2333	.2323	.2312	.2302	.2292	.2281	.2271	.2261	.2251	.2241	.2231
28.00	.2221	.2211	.2201	.2191	.2181	.2172	.2162	.2152	.2143	.2133	.2124	.2114
29.00	.2105	.2095	.2086	.2076	.2067	.2058	.2049	.2040	.2031	.2021	.2012	.2003
30.00	.1994	.1986	.1977	.1968	.1959	.1950	.1942	.1933	.1924	.1916	.1907	.1899
31.00	.1890	.1882	.1873	.1865	.1857	.1848	.1840	.1832	.1824	.1815	.1807	.1799
32.00	.1791	.1783	.1775	.1767	.1759	.1752	.1744	.1736	.1728	.1720	.1713	.1705
33.00	.1697	.1690	.1682	.1675	.1667	.1660	.1652	.1645	.1638	.1630	.1623	.1616
34.00	.1609	.1601	.1594	.1587	.1580	.1573	.1566	.1559	.1552	.1545	.1538	.1531
35.00	.1524	.1518	.1511	.1504	.1497	.1491	.1484	.1477	.1471	.1464	.1458	.1451
36.00	.1445	.1438	.1432	.1425	.1419	.1413	.1406	.1400	.1394	.1388	.1381	.1375
37.00	.1369	.1363	.1357	.1351	.1345	.1339	.1333	.1327	.1321	.1315	.1309	.1303
38.00	.1297	.1292	.1286	.1280	.1274	.1269	.1263	.1257	.1252	.1246	.1241	.1235
39.00	.1230	.1224	.1219	.1213	.1208	.1202	.1197	.1192	.1186	.1181	.1176	.1170
40.00	.1165	.1160	.1155	.1150	.1144	.1139	.1134	.1129	.1124	.1119	.1114	.1109
41.00	.1104	.1099	.1094	.1089	.1085	.1080	.1075	.1070	.1065	.1061	.1056	.1051
42.00	.1046	.1042	.1037	.1032	.1028	.1023	.1019	.1014	.1010	.1005	.1001	.0996

EU - 152

HALF-LIFE 13.00 YEARS CALCULATION INTERVAL 1.0 MONTHS

YEARS	MONTHS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9955	.9911	.9867	.9823	.9780	.9736	.9693	.9650	.9607	.9565	.9522
1.00	.9480	.9438	.9396	.9355	.9313	.9272	.9231	.9190	.9149	.9109	.9068	.9028
2.00	.8988	.8948	.8908	.8869	.8830	.8791	.8752	.8713	.8674	.8636	.8597	.8559
3.00	.8521	.8484	.8446	.8408	.8371	.8334	.8297	.8260	.8224	.8187	.8151	.8115
4.00	.8079	.8043	.8007	.7972	.7937	.7901	.7866	.7831	.7797	.7762	.7728	.7693
5.00	.7659	.7625	.7592	.7558	.7524	.7491	.7458	.7425	.7392	.7359	.7326	.7294
6.00	.7262	.7229	.7197	.7165	.7134	.7102	.7071	.7039	.7008	.6977	.6946	.6915
7.00	.6885	.6854	.6824	.6793	.6763	.6733	.6703	.6674	.6644	.6615	.6585	.6556
8.00	.6527	.6498	.6469	.6441	.6412	.6384	.6355	.6327	.6299	.6271	.6243	.6216
9.00	.6188	.6161	.6133	.6106	.6079	.6052	.6025	.5999	.5972	.5946	.5919	.5893
10.00	.5867	.5841	.5815	.5789	.5763	.5738	.5712	.5687	.5662	.5637	.5612	.5587
11.00	.5562	.5537	.5513	.5489	.5464	.5440	.5416	.5392	.5368	.5344	.5320	.5297
12.00	.5273	.5250	.5227	.5204	.5180	.5157	.5135	.5112	.5089	.5067	.5044	.5022
13.00	.5000	.4977	.4955	.4933	.4911	.4890	.4868	.4846	.4825	.4804	.4782	.4761
14.00	.4740	.4719	.4698	.4677	.4656	.4636	.4615	.4595	.4574	.4554	.4534	.4514
15.00	.4494	.4474	.4454	.4434	.4415	.4395	.4376	.4356	.4337	.4318	.4298	.4279
16.00	.4260	.4242	.4223	.4204	.4185	.4167	.4148	.4130	.4112	.4093	.4075	.4057
17.00	.4039	.4021	.4003	.3986	.3968	.3950	.3933	.3915	.3898	.3881	.3864	.3846
18.00	.3829	.3812	.3796	.3779	.3762	.3745	.3729	.3712	.3696	.3679	.3663	.3647
19.00	.3631	.3614	.3598	.3582	.3567	.3551	.3535	.3519	.3504	.3488	.3473	.3457
20.00	.3442	.3427	.3412	.3396	.3381	.3366	.3351	.3337	.3322	.3307	.3292	.3278
21.00	.3263	.3249	.3234	.3220	.3206	.3192	.3177	.3163	.3149	.3135	.3121	.3108
22.00	.3094	.3080	.3066	.3053	.3039	.3026	.3012	.2999	.2986	.2973	.2959	.2946
23.00	.2933	.2920	.2907	.2894	.2881	.2869	.2856	.2843	.2831	.2818	.2806	.2793
24.00	.2781	.2769	.2756	.2744	.2732	.2720	.2708	.2696	.2684	.2672	.2660	.2648
25.00	.2636	.2625	.2613	.2602	.2590	.2578	.2567	.2556	.2544	.2533	.2522	.2511
26.00	.2500	.2488	.2477	.2466	.2455	.2445	.2434	.2423	.2412	.2402	.2391	.2380
27.00	.2370	.2359	.2349	.2338	.2328	.2318	.2307	.2297	.2287	.2277	.2267	.2257
28.00	.2247	.2237	.2227	.2217	.2207	.2197	.2188	.2178	.2168	.2159	.2149	.2139
29.00	.2130	.2121	.2111	.2102	.2092	.2083	.2074	.2065	.2056	.2046	.2037	.2028
30.00	.2019	.2010	.2001	.1993	.1984	.1975	.1966	.1957	.1949	.1940	.1932	.1923
31.00	.1914	.1906	.1898	.1889	.1881	.1872	.1864	.1856	.1848	.1839	.1831	.1823
32.00	.1815	.1807	.1799	.1791	.1783	.1775	.1767	.1759	.1752	.1744	.1736	.1728
33.00	.1721	.1713	.1706	.1698	.1690	.1683	.1675	.1668	.1661	.1653	.1646	.1639
34.00	.1631	.1624	.1617	.1610	.1603	.1596	.1588	.1581	.1574	.1567	.1560	.1554
35.00	.1547	.1540	.1533	.1526	.1519	.1513	.1506	.1499	.1493	.1486	.1479	.1473
36.00	.1466	.1460	.1453	.1447	.1440	.1434	.1428	.1421	.1415	.1409	.1403	.1396
37.00	.1390	.1384	.1378	.1372	.1366	.1360	.1354	.1348	.1342	.1336	.1330	.1324
38.00	.1318	.1312	.1306	.1301	.1295	.1289	.1283	.1278	.1272	.1266	.1261	.1255
39.00	.1250	.1244	.1238	.1233	.1227	.1222	.1217	.1211	.1206	.1201	.1195	.1190
40.00	.1185	.1179	.1174	.1169	.1164	.1159	.1153	.1148	.1143	.1138	.1133	.1128
41.00	.1123	.1118	.1113	.1108	.1103	.1098	.1094	.1089	.1084	.1079	.1074	.1069
42.00	.1065	.1060	.1055	.1051	.1046	.1041	.1037	.1032	.1028	.1023	.1018	.1014
43.00	.1009	.1005	.1000	.0996	.0992	.0987	.0983	.0978	.0974	.0970	.0966	.0961

EU - 154

HALF-LIFE 16.00 YEARS CALCULATION INTERVAL 2.0 MONTHS

YEARS	MONTHS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
0.00	1.0000	.9928	.9856	.9785	.9715	.9645	.9576	.9507	.9438	.9370	.9303	.9236
2.00	.9170	.9104	.9038	.8973	.8908	.8844	.8781	.8718	.8655	.8593	.8531	.8469
4.00	.8408	.8348	.8288	.8228	.8169	.8110	.8052	.7994	.7937	.7879	.7823	.7766
6.00	.7711	.7655	.7600	.7545	.7491	.7437	.7384	.7331	.7278	.7225	.7173	.7122
8.00	.707[illegible]	.7020	.6969	.6919	.6869	.6820	.6771	.6722	.6674	.6626	.6578	.6531
10.00	.6484	.6437	.6391	.6345	.6299	.6254	.6209	.6164	.6120	.6076	.6032	.5989
12.00	.5946	.5903	.5860	.5818	.5776	.5735	.5693	.5652	.5612	.5571	.5531	.5492
14.00	.5452	.5413	.5374	.5335	.5297	.5259	.5221	.5183	.5146	.5109	.5072	.5036
16.00	.5000	.4964	.4928	.4892	.4857	.4822	.4788	.4753	.4719	.4685	.4651	.4618
18.00	.4585	.4552	.4519	.4486	.4454	.4422	.4390	.4359	.4327	.4296	.4265	.4234
20.00	.4204	.4174	.4144	.4114	.4084	.4055	.4026	.3997	.3968	.3939	.3911	.3883
22.00	.3855	.3827	.3800	.3772	.3745	.3718	.3692	.3665	.3639	.3612	.3586	.3561
24.00	.3535	.3510	.3484	.3459	.3434	.3410	.3385	.3361	.3337	.3313	.3289	.3265
26.00	.3242	.3218	.3195	.3172	.3149	.3127	.3104	.3082	.3060	.3038	.3016	.2994
28.00	.2973	.2951	.2930	.2909	.2888	.2867	.2846	.2826	.2806	.2785	.2765	.2746
30.00	.2726	.2706	.2687	.2667	.2648	.2629	.2610	.2591	.2573	.2554	.2536	.2518
32.00	.2500	.2482	.2464	.2446	.2428	.2411	.2394	.2376	.2359	.2342	.2325	.2309
34.00	.2292	.2276	.2259	.2243	.2227	.2211	.2195	.2179	.2163	.2148	.2132	.2117
36.00	.2102	.2087	.2072	.2057	.2042	.2027	.2013	.1998	.1984	.1969	.1955	.1941
38.00	.1927	.1913	.1900	.1886	.1872	.1859	.1846	.1832	.1819	.1806	.1793	.1780
40.00	.1767	.1755	.1742	.1729	.1717	.1705	.1692	.1680	.1668	.1656	.1644	.1632
42.00	.1621	.1609	.1597	.1586	.1574	.1563	.1552	.1541	.1530	.1519	.1508	.1497
44.00	.1486	.1475	.1465	.1454	.1444	.1433	.1423	.1413	.1403	.1392	.1382	.1373
46.00	.1363	.1353	.1343	.1333	.1324	.1314	.1305	.1295	.1286	.1277	.1268	.1259
48.00	.1250	.1241	.1232	.1223	.1214	.1205	.1197	.1188	.1179	.1171	.1162	.1154
50.00	.1146	.1138	.1129	.1121	.1113	.1105	.1097	.1089	.1081	.1074	.1066	.1058
52.00	.1051	.1043	.1036	.1028	.1021	.1013	.1006	.0999	.0992	.0984	.0977	.0970

EU - 155

HALF-LIFE 1.70 YEARS CALCULATION INTERVAL 10.0 DAYS

DAYS	DAYS 0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
0.0	1.0000	.9888	.9779	.9670	.9563	.9456	.9351	.9247	.9145	.9043
100.0	.8943	.8843	.8745	.8648	.8552	.8457	.8363	.8270	.8178	.8087
200.0	.7997	.7908	.7821	.7734	.7648	.7563	.7479	.7396	.7314	.7232
300.0	.7152	.7073	.6994	.6916	.6839	.6763	.6688	.6614	.6541	.6468
400.0	.6396	.6325	.6255	.6185	.6116	.6049	.5981	.5915	.5849	.5784
500.0	.5720	.5656	.5594	.5531	.5470	.5409	.5349	.5290	.5231	.5173
600.0	.5115	.5058	.5002	.4947	.4892	.4837	.4784	.4731	.4678	.4626
700.0	.4575	.4524	.4474	.4424	.4375	.4326	.4278	.4230	.4183	.4137
800.0	.4091	.4046	.4001	.3956	.3912	.3869	.3826	.3783	.3741	.3700
900.0	.3659	.3618	.3578	.3538	.3499	.3460	.3421	.3383	.3346	.3309
1000.0	.3272	.3235	.3200	.3164	.3129	.3094	.3060	.3026	.2992	.2959
1100.0	.2926	.2893	.2861	.2830	.2798	.2767	.2736	.2706	.2676	.2646
1200.0	.2617	.2588	.2559	.2530	.2502	.2474	.2447	.2420	.2393	.2366
1300.0	.2340	.2314	.2288	.2263	.2238	.2213	.2188	.2164	.2140	.2116
1400.0	.2093	.2069	.2046	.2024	.2001	.1979	.1957	.1935	.1914	.1892
1500.0	.1871	.1851	.1830	.1810	.1790	.1770	.1750	.1731	.1711	.1692
1600.0	.1674	.1655	.1637	.1618	.1600	.1583	.1565	.1548	.1530	.1513
1700.0	.1497	.1480	.1464	.1447	.1431	.1415	.1400	.1384	.1369	.1353
1800.0	.1338	.1324	.1309	.1294	.1280	.1266	.1252	.1238	.1224	.1210
1900.0	.1197	.1184	.1170	.1157	.1145	.1132	.1119	.1107	.1095	.1082
2000.0	.1070	.1058	.1047	.1035	.1024	.1012	.1001	.0990	.0979	.0968

FR - 221

HALF-LIFE 4.80 MINUTES CALCULATION INTERVAL 3.0 SECONDS

MINUTES	SECONDS 0.0	3.0	6.0	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.0
0.00	1.0000	.9928	.9856	.9785	.9715	.9645	.9576	.9507	.9438	.9370	.9303	.9236
.60	.9170	.9104	.9038	.8973	.8908	.8844	.8781	.8718	.8655	.8593	.8531	.8469
1.20	.8408	.8348	.8288	.8228	.8169	.8110	.8052	.7994	.7937	.7879	.7823	.7766
1.80	.7711	.7655	.7600	.7545	.7491	.7437	.7384	.7331	.7278	.7225	.7173	.7122
2.40	.7071	.7020	.6969	.6919	.6869	.6820	.6771	.6722	.6674	.6626	.6578	.6531
3.00	.6484	.6437	.6391	.6345	.6299	.6254	.6209	.6164	.6120	.6076	.6032	.5989
3.60	.5946	.5903	.5860	.5818	.5776	.5735	.5693	.5652	.5612	.5571	.5531	.5492
4.20	.5452	.5413	.5374	.5335	.5297	.5259	.5221	.5183	.5146	.5109	.5072	.5036
4.80	.5000	.4964	.4928	.4892	.4857	.4822	.4788	.4753	.4719	.4685	.4651	.4618
5.40	.4585	.4552	.4519	.4486	.4454	.4422	.4390	.4359	.4327	.4296	.4265	.4234
6.00	.4204	.4174	.4144	.4114	.4084	.4055	.4026	.3997	.3968	.3939	.3911	.3883
6.60	.3855	.3827	.3800	.3772	.3745	.3718	.3692	.3665	.3639	.3612	.3586	.3561
7.20	.3535	.3510	.3484	.3459	.3434	.3410	.3385	.3361	.3337	.3313	.3289	.3265
7.80	.3242	.3218	.3195	.3172	.3149	.3127	.3104	.3082	.3060	.3038	.3016	.2994
8.40	.2973	.2951	.2930	.2909	.2888	.2867	.2846	.2826	.2806	.2785	.2765	.2746
9.00	.2726	.2706	.2687	.2667	.2648	.2629	.2610	.2591	.2573	.2554	.2536	.2518
9.60	.2500	.2482	.2464	.2446	.2428	.2411	.2394	.2376	.2359	.2342	.2325	.2309
10.20	.2292	.2276	.2259	.2243	.2227	.2211	.2195	.2179	.2163	.2148	.2132	.2117
10.80	.2102	.2087	.2072	.2057	.2042	.2027	.2013	.1998	.1984	.1969	.1955	.1941
11.40	.1927	.1913	.1900	.1886	.1872	.1859	.1846	.1832	.1819	.1806	.1793	.1780
12.00	.1767	.1755	.1742	.1729	.1717	.1705	.1692	.1680	.1668	.1656	.1644	.1632
12.60	.1621	.1609	.1597	.1586	.1574	.1563	.1552	.1541	.1530	.1519	.1508	.1497
13.20	.1486	.1475	.1465	.1454	.1444	.1433	.1423	.1413	.1403	.1392	.1382	.1373
13.80	.1363	.1353	.1343	.1333	.1324	.1314	.1305	.1295	.1286	.1277	.1268	.1259
14.40	.1250	.1241	.1232	.1223	.1214	.1205	.1197	.1188	.1179	.1171	.1162	.1154
15.00	.1146	.1138	.1129	.1121	.1113	.1105	.1097	.1089	.1081	.1074	.1066	.1058
15.60	.1051	.1043	.1036	.1028	.1021	.1013	.1006	.0999	.0992	.0984	.0977	.0970

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HALF-LIFE 22.00 MINUTES CALCULATION INTERVAL 10.0 SECONDS

	SECONDS											
MINUTES	0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0
0.00	1.0000	.9947	.9895	.9843	.9792	.9740	.9689	.9639	.9588	.9538	.9488	.9438
2.00	.9389	.9340	.9291	.9242	.9194	.9145	.9098	.9050	.9003	.8955	.8908	.8862
4.00	.8815	.8769	.8723	.8678	.8632	.8587	.8542	.8497	.8453	.8408	.8364	.8321
6.00	.8277	.8234	.8191	.8148	.8105	.8063	.8020	.7978	.7937	.7895	.7854	.7812
8.00	.7772	.7731	.7690	.7650	.7610	.7570	.7530	.7491	.7452	.7413	.7374	.7335
10.00	.7297	.7259	.7221	.7183	.7145	.7108	.7071	.7034	.6997	.6960	.6924	.6887
12.00	.6851	.6815	.6780	.6744	.6709	.6674	.6639	.6604	.6569	.6535	.6501	.6467
14.00	.6433	.6399	.6366	.6332	.6299	.6266	.6233	.6201	.6168	.6136	.6104	.6072
16.00	.6040	.6008	.5977	.5946	.5914	.5883	.5853	.5822	.5791	.5761	.5731	.5701
18.00	.5671	.5641	.5612	.5582	.5553	.5524	.5495	.5466	.5438	.5409	.5381	.5353
20.00	.5325	.5297	.5269	.5241	.5214	.5187	.5160	.5133	.5106	.5079	.5052	.5026
22.00	.5000	.4973	.4947	.4921	.4896	.4870	.4844	.4819	.4794	.4769	.4744	.4719
24.00	.4694	.4670	.4645	.4621	.4597	.4573	.4549	.4525	.4501	.4477	.4454	.4431
26.00	.4407	.4384	.4361	.4339	.4316	.4293	.4271	.4248	.4226	.4204	.4182	.4160
28.00	.4138	.4117	.4095	.4074	.4052	.4031	.4010	.3989	.3968	.3947	.3927	.3906
30.00	.3886	.3865	.3845	.3825	.3805	.3785	.3765	.3745	.3726	.3706	.3687	.3667
32.00	.3648	.3629	.3610	.3591	.3572	.3554	.3535	.3517	.3498	.3480	.3462	.3443
34.00	.3425	.3407	.3390	.3372	.3354	.3337	.3319	.3302	.3284	.3267	.3250	.3233
36.00	.3216	.3199	.3183	.3166	.3149	.3133	.3116	.3100	.3084	.3068	.3052	.3036
38.00	.3020	.3004	.2988	.2973	.2957	.2941	.2926	.2911	.2895	.2880	.2865	.2850
40.00	.2835	.2820	.2806	.2791	.2776	.2762	.2747	.2733	.2719	.2704	.2690	.2676
42.00	.2662	.2648	.2634	.2620	.2607	.2593	.2580	.2566	.2553	.2539	.2526	.2513
44.00	.2500	.2486	.2473	.2460	.2448	.2435	.2422	.2409	.2397	.2384	.2372	.2359
46.00	.2347	.2335	.2322	.2310	.2298	.2286	.2274	.2262	.2250	.2238	.2227	.2215
48.00	.2203	.2192	.2180	.2169	.2158	.2146	.2135	.2124	.2113	.2102	.2091	.2080
50.00	.2069	.2058	.2047	.2037	.2026	.2015	.2005	.1994	.1984	.1973	.1963	.1953
52.00	.1943	.1932	.1922	.1912	.1902	.1892	.1882	.1872	.1863	.1853	.1843	.1833
54.00	.1824	.1814	.1805	.1795	.1786	.1777	.1767	.1758	.1749	.1740	.1731	.1721
56.00	.1712	.1703	.1695	.1686	.1677	.1668	.1659	.1651	.1642	.1633	.1625	.1616
58.00	.1608	.1599	.1591	.1583	.1574	.1566	.1558	.1550	.1542	.1534	.1526	.1518
60.00	.1510	.1502	.1494	.1486	.1478	.1470	.1463	.1455	.1447	.1440	.1432	.1425
62.00	.1417	.1410	.1403	.1395	.1388	.1381	.1373	.1366	.1359	.1352	.1345	.1338
64.00	.1331	.1324	.1317	.1310	.1303	.1296	.1290	.1283	.1276	.1269	.1263	.1256
66.00	.1250	.1243	.1236	.1230	.1224	.1217	.1211	.1204	.1198	.1192	.1186	.1179
68.00	.1173	.1167	.1161	.1155	.1149	.1143	.1137	.1131	.1125	.1119	.1113	.1107
70.00	.1101	.1096	.1090	.1084	.1079	.1073	.1067	.1062	.1056	.1051	.1045	.1040
72.00	.1034	.1029	.1023	.1018	.1013	.1007	.1002	.0997	.0992	.0986	.0981	.0976

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HALF-LIFE 236.00 DAYS CALCULATION INTERVAL 2.0 DAYS

DAYS	DAYS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0
0.0	1.0000	.9941	.9883	.9825	.9767	.9710	.9653	.9597	.9540	.9485
20.0	.9429	.9374	.9319	.9264	.9210	.9156	.9102	.9049	.8996	.8943
40.0	.8891	.8839	.8787	.8736	.8685	.8634	.8583	.8533	.8483	.8433
60.0	.8384	.8335	.8286	.8237	.8189	.8141	.8093	.8046	.7999	.7952
80.0	.7905	.7859	.7813	.7767	.7722	.7677	.7632	.7587	.7543	.7498
100.0	.7454	.7411	.7367	.7324	.7281	.7239	.7196	.7154	.7112	.7071
120.0	.7029	.6988	.6947	.6906	.6866	.6826	.6786	.6746	.6706	.6667
140.0	.6628	.6589	.6551	.6512	.6474	.6436	.6399	.6361	.6324	.6287
160.0	.6250	.6213	.6177	.6141	.6105	.6069	.6033	.5998	.5963	.5928
180.0	.5893	.5859	.5825	.5790	.5757	.5723	.5689	.5656	.5623	.5590
200.0	.5557	.5525	.5492	.5460	.5428	.5396	.5365	.5333	.5302	.5271
220.0	.5240	.5209	.5179	.5149	.5118	.5088	.5059	.5029	.5000	.4970
240.0	.4941	.4912	.4883	.4855	.4826	.4798	.4770	.4742	.4714	.4687
260.0	.4659	.4632	.4605	.4578	.4551	.4524	.4498	.4471	.4445	.4419
280.0	.4393	.4368	.4342	.4317	.4291	.4266	.4241	.4216	.4192	.4167
300.0	.4143	.4118	.4094	.4070	.4046	.4023	.3999	.3976	.3952	.3929
320.0	.3906	.3883	.3861	.3838	.3816	.3793	.3771	.3749	.3727	.3705
340.0	.3683	.3662	.3640	.3619	.3598	.3577	.3556	.3535	.3514	.3494
360.0	.3473	.3453	.3433	.3413	.3393	.3373	.3353	.3333	.3314	.3294
380.0	.3275	.3256	.3237	.3218	.3199	.3180	.3162	.3143	.3125	.3106
400.0	.3088	.3070	.3052	.3034	.3016	.2999	.2981	.2964	.2946	.2929
420.0	.2912	.2895	.2878	.2861	.2844	.2828	.2811	.2795	.2778	.2762
440.0	.2746	.2730	.2714	.2698	.2682	.2666	.2651	.2635	.2620	.2604
460.0	.2589	.2574	.2559	.2544	.2529	.2514	.2500	.2485	.2470	.2456
480.0	.2441	.2427	.2413	.2399	.2385	.2371	.2357	.2343	.2329	.2316
500.0	.2302	.2289	.2275	.2262	.2249	.2235	.2222	.2209	.2196	.2184
520.0	.2171	.2158	.2145	.2133	.2120	.2108	.2096	.2083	.2071	.2059
540.0	.2047	.2035	.2023	.2011	.1999	.1988	.1976	.1964	.1953	.1941
560.0	.1930	.1919	.1908	.1896	.1885	.1874	.1863	.1852	.1841	.1831
580.0	.1820	.1809	.1799	.1788	.1778	.1767	.1757	.1747	.1736	.1726
600.0	.1716	.1706	.1696	.1686	.1676	.1666	.1657	.1647	.1637	.1628
620.0	.1618	.1609	.1599	.1590	.1581	.1571	.1562	.1553	.1544	.1535
640.0	.1526	.1517	.1508	.1499	.1490	.1482	.1473	.1464	.1456	.1447
660.0	.1439	.1430	.1422	.1414	.1405	.1397	.1389	.1381	.1373	.1365
680.0	.1357	.1349	.1341	.1333	.1325	.1317	.1310	.1302	.1294	.1287
700.0	.1279	.1272	.1264	.1257	.1250	.1242	.1235	.1228	.1220	.1213
720.0	.1206	.119	.1192	.1185	.1178	.1171	.1164	.1158	.1151	.1144
740.0	.1137	.1131	.1124	.1117	.1111	.1104	.1098	.1092	.1085	.1079
760.0	.1072	.1066	.1060	.1054	.1048	.1041	.1035	.1029	.1023	.1017
780.0	.1011	.1005	.0999	.0994	.0988	.0982	.0976	.0970	.0965	.0959

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HALF-LIFE 64.80 HOURS CALCULATION INTERVAL .5 HOURS

HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
0.0	1.0000	.9946	.9893	.9840	.9788	.9736	.9684	.9632	.9581	.9530
5.0	.9479	.9428	.9378	.9328	.9278	.9229	.9179	.9130	.9082	.9033
10.0	.8985	.8937	.8889	.8842	.8795	.8748	.8701	.8655	.8609	.8563
15.0	.8517	.8472	.8426	.8382	.8337	.8292	.8248	.8204	.8160	.8117
20.0	.8074	.8030	.7988	.7945	.7903	.7860	.7819	.7777	.7735	.7694
25.0	.7653	.7612	.7572	.7531	.7491	.7451	.7411	.7372	.7332	.7293
30.0	.7254	.7216	.7177	.7139	.7101	.7063	.7025	.6988	.6951	.6914
35.0	.6877	.6840	.6803	.6767	.6731	.6695	.6659	.6624	.6589	.6553
40.0	.6518	.6484	.6449	.6415	.6380	.6346	.6313	.6279	.6245	.6212
45.0	.6179	.6146	.6113	.6081	.6048	.6016	.5984	.5952	.5920	.5889
50.0	.5857	.5826	.5795	.5764	.5733	.5703	.5672	.5642	.5612	.5582
55.0	.5552	.5522	.5493	.5464	.5435	.5406	.5377	.5348	.5320	.5291
60.0	.5263	.5235	.5207	.5179	.5152	.5124	.5097	.5070	.5042	.5016
65.0	.4989	.4962	.4936	.4909	.4883	.4857	.4831	.4805	.4780	.4754
70.0	.4729	.4704	.4679	.4654	.4629	.4604	.4580	.4555	.4531	.4507
75.0	.4483	.4459	.4435	.4411	.4388	.4364	.4341	.4318	.4295	.4272
80.0	.4249	.4227	.4204	.4182	.4159	.4137	.4115	.4093	.4071	.4049
85.0	.4028	.4006	.3985	.3964	.3943	.3922	.3901	.3880	.3859	.3839
90.0	.3818	.3798	.3777	.3757	.3737	.3717	.3697	.3678	.3658	.3639
95.0	.3619	.3600	.3581	.3562	.3543	.3524	.3505	.3486	.3468	.3449
100.0	.3431	.3412	.3394	.3376	.3358	.3340	.3322	.3305	.3287	.3269
105.0	.3252	.3235	.3217	.3200	.3183	.3166	.3149	.3133	.3116	.3099
110.0	.3083	.3066	.3050	.3034	.3017	.3001	.2985	.2969	.2953	.2938
115.0	.2922	.2906	.2891	.2876	.2860	.2845	.2830	.2815	.2800	.2785
120.0	.2770	.2755	.2740	.2726	.2711	.2697	.2682	.2668	.2654	.2640
125.0	.2626	.2612	.2598	.2584	.2570	.2556	.2543	.2529	.2516	.2502
130.0	.2489	.2476	.2462	.2449	.2436	.2423	.2410	.2397	.2385	.2372
135.0	.2359	.2347	.2334	.2322	.2309	.2297	.2285	.2272	.2260	.2248
140.0	.2236	.2224	.2212	.2201	.2189	.2177	.2166	.2154	.2143	.2131
145.0	.2120	.2108	.2097	.2086	.2075	.2064	.2053	.2042	.2031	.2020
150.0	.2009	.1999	.1988	.1977	.1967	.1956	.1946	.1936	.1925	.1915
155.0	.1905	.1895	.1884	.1874	.1864	.1854	.1845	.1835	.1825	.1815
160.0	.1805	.1796	.1786	.1777	.1767	.1758	.1748	.1739	.1730	.1721
165.0	.1711	.1702	.1693	.1684	.1675	.1666	.1657	.1649	.1640	.1631
170.0	.1622	.1614	.1605	.1596	.1588	.1579	.1571	.1563	.1554	.1546
175.0	.1538	.1530	.1521	.1513	.1505	.1497	.1489	.1481	.1473	.1465
180.0	.1458	.1450	.1442	.1434	.1427	.1419	.1412	.1404	.1397	.1389
185.0	.1382	.1374	.1367	.1360	.1352	.1345	.1338	.1331	.1324	.1317
190.0	.1310	.1303	.1296	.1289	.1282	.1275	.1268	.1262	.1255	.1248
195.0	.1242	.1235	.1228	.1222	.1215	.1209	.1202	.1196	.1189	.1183
200.0	.1177	.1171	.1164	.1158	.1152	.1146	.1140	.1134	.1128	.1121
205.0	.1116	.1110	.1104	.1098	.1092	.1086	.1080	.1074	.1069	.1063
210.0	.1057	.1052	.1046	.1041	.1035	.1029	.1024	.1019	.1013	.1008
215.0	.1002	.0997	.0992	.0986	.0981	.0976	.0971	.0965	.0960	.0955

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HALF-LIFE 43.00 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
0.00	1.0000	.9946	.9893	.9840	.9787	.9734	.9682	.9630	.9579	.9527	.9476	.9426
4.00	.9375	.9325	.9275	.9225	.9176	.9127	.9078	.9029	.8981	.8932	.8885	.8837
8.00	.8790	.8743	.8696	.8649	.8603	.8557	.8511	.8465	.8420	.8375	.8330	.8285
12.00	.8241	.8197	.8153	.8109	.8065	.8022	.7979	.7937	.7894	.7852	.7810	.7768
16.00	.7726	.7685	.7644	.7603	.7562	.7521	.7481	.7441	.7401	.7361	.7322	.7283
20.00	.7244	.7205	.7166	.7128	.7090	.7052	.7014	.6976	.6939	.6902	.6865	.6828
24.00	.6791	.6755	.6719	.6683	.6647	.6611	.6576	.6541	.6506	.6471	.6436	.6401
28.00	.6367	.6333	.6299	.6265	.6232	.6198	.6165	.6132	.6099	.6067	.6034	.6002
32.00	.5970	.5938	.5906	.5874	.5843	.5811	.5780	.5749	.5718	.5688	.5657	.5627
36.00	.5597	.5567	.5537	.5507	.5478	.5448	.5419	.5390	.5361	.5333	.5304	.5276
40.00	.5247	.5219	.5191	.5163	.5136	.5108	.5081	.5054	.5026	.5000	.4973	.4946
44.00	.4920	.4893	.4867	.4841	.4815	.4789	.4763	.4738	.4713	.4687	.4662	.4637
48.00	.4612	.4588	.4563	.4539	.4514	.4490	.4466	.4442	.4418	.4395	.4371	.4348
52.00	.4324	.4301	.4278	.4255	.4232	.4210	.4187	.4165	.4142	.4120	.4098	.4076
56.00	.4054	.4032	.4011	.3989	.3968	.3947	.3926	.3905	.3884	.3863	.3842	.3822
60.00	.3801	.3781	.3760	.3740	.3720	.3700	.3680	.3661	.3641	.3622	.3602	.3583
64.00	.3564	.3545	.3526	.3507	.3488	.3469	.3451	.3432	.3414	.3395	.3377	.3359
68.00	.3341	.3323	.3305	.3288	.3270	.3253	.3235	.3218	.3200	.3183	.3166	.3149
72.00	.3132	.3116	.3099	.3082	.3066	.3049	.3033	.3017	.3001	.2985	.2969	.2953
76.00	.2937	.2921	.2905	.2890	.2874	.2859	.2844	.2828	.2813	.2798	.2783	.2768
80.00	.2753	.2739	.2724	.2709	.2695	.2680	.2666	.2652	.2638	.2623	.2609	.2595
84.00	.2581	.2568	.2554	.2540	.2527	.2513	.2500	.2486	.2473	.2460	.2446	.2433
88.00	.2420	.2407	.2394	.2381	.2369	.2356	.2343	.2331	.2318	.2306	.2294	.2281
92.00	.2269	.2257	.2245	.2233	.2221	.2209	.2197	.2185	.2174	.2162	.2150	.2139
96.00	.2127	.2116	.2105	.2093	.2082	.2071	.2060	.2049	.2038	.2027	.2016	.2005
100.00	.1994	.1984	.1973	.1963	.1952	.1942	.1931	.1921	.1911	.1900	.1890	.1880
104.00	.1870	.1860	.1850	.1840	.1830	.1820	.1811	.1801	.1791	.1782	.1772	.1763
108.00	.1753	.1744	.1734	.1725	.1716	.1707	.1697	.1688	.1679	.1670	.1661	.1652
112.00	.1644	.1635	.1626	.1617	.1609	.1600	.1591	.1583	.1574	.1566	.1558	.1549
116.00	.1541	.1533	.1524	.1516	.1508	.1500	.1492	.1484	.1476	.1468	.1460	.1452
120.00	.1445	.1437	.1429	.1422	.1414	.1406	.1399	.1391	.1384	.1376	.1369	.1362
124.00	.1354	.1347	.1340	.1333	.1326	.1319	.1311	.1304	.1297	.1290	.1284	.1277
128.00	.1270	.1263	.1256	.1250	.1243	.1236	.1230	.1223	.1216	.1210	.1203	.1197
132.00	.1190	.1184	.1178	.1171	.1165	.1159	.1153	.1147	.1140	.1134	.1128	.1122
136.00	.1116	.1110	.1104	.1098	.1092	.1087	.1081	.1075	.1069	.1063	.1058	.1052
140.00	.1046	.1041	.1035	.1030	.1024	.1019	.1013	.1008	.1002	.0997	.0992	.0986

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HALF-LIFE 12.26 YEARS CALCULATION INTERVAL 30.0 DAYS

DAYS	0.0	30.0	60.0	90.0	120.0	150.0	180.0	210.0	240.0	270.0
0.0	1.0000	.9953	.9907	.9861	.9815	.9770	.9725	.9679	.9635	.9590
300.0	.9545	.9501	.9457	.9413	.9370	.9326	.9283	.9240	.9197	.9154
600.0	.9112	.9070	.9028	.8986	.8944	.8903	.8861	.8820	.8779	.8739
900.0	.8698	.8658	.8618	.8578	.8538	.8498	.8459	.8420	.8381	.8342
1200.0	.8303	.8265	.8226	.8188	.8150	.8113	.8075	.8038	.8000	.7963
1500.0	.7926	.7889	.7853	.7816	.7780	.7744	.7708	.7673	.7637	.7602
1800.0	.7566	.7531	.7496	.7462	.7427	.7393	.7358	.7324	.7290	.7256
2100.0	.7223	.7189	.7156	.7123	.7090	.7057	.7024	.6992	.6959	.6927
2400.0	.6895	.6863	.6831	.6799	.6768	.6736	.6705	.6674	.6643	.6612
2700.0	.6582	.6551	.6521	.6491	.6460	.6430	.6401	.6371	.6341	.6312
3000.0	.6283	.6254	.6225	.6196	.6167	.6138	.6110	.6082	.6054	.6025
3300.0	.5998	.5970	.5942	.5914	.5887	.5860	.5833	.5806	.5779	.5752
3600.0	.5725	.5699	.5672	.5646	.5620	.5594	.5568	.5542	.5516	.5491
3900.0	.5465	.5440	.5415	.5390	.5365	.5340	.5315	.5290	.5266	.5241
4200.0	.5217	.5193	.5169	.5145	.5121	.5097	.5074	.5050	.5027	.5003
4500.0	.4980	.4957	.4934	.4911	.4888	.4866	.4843	.4821	.4798	.4776
4800.0	.4754	.4732	.4710	.4688	.4666	.4645	.4623	.4602	.4580	.4559
5100.0	.4538	.4517	.4496	.4475	.4455	.4434	.4413	.4393	.4372	.4352
5400.0	.4332	.4312	.4292	.4272	.4252	.4233	.4213	.4193	.4174	.4155
5700.0	.4135	.4116	.4097	.4078	.4059	.4040	.4022	.4003	.3984	.3966
6000.0	.3947	.3929	.3911	.3893	.3875	.3857	.3839	.3821	.3803	.3786
6300.0	.3768	.3751	.3733	.3716	.3699	.3682	.3665	.3648	.3631	.3614
6600.0	.3597	.3580	.3564	.3547	.3531	.3514	.3498	.3482	.3466	.3450
6900.0	.3434	.3418	.3402	.3386	.3371	.3355	.3339	.3324	.3308	.3293
7200.0	.3278	.3263	.3248	.3232	.3217	.3203	.3188	.3173	.3158	.3144
7500.0	.3129	.3114	.3100	.3086	.3071	.3057	.3043	.3029	.3015	.3001
7800.0	.2987	.2973	.2959	.2946	.2932	.2918	.2905	.2891	.2878	.2865
8100.0	.2851	.2838	.2825	.2812	.2799	.2786	.2773	.2760	.2747	.2734
8400.0	.2722	.2709	.2697	.2684	.2672	.2659	.2647	.2635	.2622	.2610
8700.0	.2598	.2586	.2574	.2562	.2550	.2538	.2527	.2515	.2503	.2492
9000.0	.2480	.2469	.2457	.2446	.2434	.2423	.2412	.2401	.2390	.2379
9300.0	.2368	.2357	.2346	.2335	.2324	.2313	.2302	.2292	.2281	.2271
9600.0	.2260	.2250	.2239	.2229	.2218	.2208	.2198	.2188	.2178	.2167
9900.0	.2157	.2147	.2137	.2127	.2118	.2108	.2098	.2088	.2079	.2069
10200.0	.2059	.2050	.2040	.2031	.2021	.2012	.2003	.1993	.1984	.1975
10500.0	.1966	.1957	.1948	.1939	.1930	.1921	.1912	.1903	.1894	.1885
10800.0	.1877	.1868	.1859	.1851	.1842	.1833	.1825	.1816	.1808	.1800
11100.0	.1791	.1783	.1775	.1767	.1758	.1750	.1742	.1734	.1726	.1718
11400.0	.1710	.1702	.1694	.1686	.1678	.1671	.1663	.1655	.1648	.1640
11700.0	.1632	.1625	.1617	.1610	.1602	.1595	.1587	.1580	.1573	.1565

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HALF-LIFE 12.26 YEARS CALCULATION INTERVAL 30.0 DAYS

DAYS	DAYS 0.0	30.0	60.0	90.0	120.0	150.0	180.0	210.0	240.0	270.0
12000.0	.1558	.1551	.1544	.1537	.1529	.1522	.1515	.1508	.1501	.1494
12300.0	.1487	.1481	.1474	.1467	.1460	.1453	.1446	.1440	.1433	.1426
12600.0	.1420	.1413	.1407	.1400	.1394	.1387	.1381	.1374	.1368	.1362
12900.0	.1355	.1349	.1343	.1337	.1330	.1324	.1318	.1312	.1306	.1300
13200.0	.1294	.1288	.1282	.1276	.1270	.1264	.1258	.1252	.1247	.1241
13500.0	.1235	.1229	.1224	.1218	.1212	.1207	.1201	.1195	.1190	.1184
13800.0	.1179	.1173	.1168	.1163	.1157	.1152	.1146	.1141	.1136	.1131
14100.0	.1125	.1120	.1115	.1110	.1105	.1100	.1094	.1089	.1084	.1079
14400.0	.1074	.1069	.1064	.1059	.1054	.1050	.1045	.1040	.1035	.1030
14700.0	.1025	.1021	.1016	.1011	.1007	.1002	.0997	.0993	.0988	.0983

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HALF-LIFE 57.40 DAYS CALCULATION INTERVAL .5 DAYS

DAYS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
0.0	1.0000	.9939	.9879	.9820	.9761	.9702	.9644	.9586	.9528	.9471
5.0	.9414	.9357	.9301	.9245	.9189	.9134	.9079	.9024	.8970	.8916
10.0	.8862	.8809	.8756	.8703	.8651	.8598	.8547	.8495	.8444	.8393
15.0	.8343	.8292	.8243	.8193	.8144	.8095	.8046	.7997	.7949	.7901
20.0	.7854	.7807	.7760	.7713	.7666	.7620	.7574	.7529	.7484	.7438
25.0	.7394	.7349	.7305	.7261	.7217	.7174	.7131	.7088	.7045	.7003
30.0	.6960	.6919	.6877	.6835	.6794	.6753	.6713	.6672	.6632	.6592
35.0	.6553	.6513	.6474	.6435	.6396	.6358	.6319	.6281	.6244	.6206
40.0	.6169	.6131	.6095	.6058	.6021	.5985	.5949	.5913	.5878	.5842
45.0	.5807	.5772	.5737	.5703	.5669	.5634	.5601	.5567	.5533	.5500
50.0	.5467	.5434	.5401	.5369	.5336	.5304	.5272	.5241	.5209	.5178
55.0	.5147	.5116	.5085	.5054	.5024	.4993	.4963	.4934	.4904	.4874
60.0	.4845	.4816	.4787	.4758	.4729	.4701	.4673	.4644	.4616	.4589
65.0	.4561	.4534	.4506	.4479	.4452	.4425	.4399	.4372	.4346	.4320
70.0	.4294	.4268	.4242	.4217	.4191	.4166	.4141	.4116	.4091	.4067
75.0	.4042	.4018	.3994	.3970	.3946	.3922	.3898	.3875	.3852	.3828
80.0	.3805	.3782	.3760	.3737	.3714	.3692	.3670	.3648	.3626	.3604
85.0	.3582	.3561	.3539	.3518	.3497	.3476	.3455	.3434	.3413	.3393
90.0	.3372	.3352	.3332	.3312	.3292	.3272	.3252	.3233	.3213	.3194
95.0	.3175	.3156	.3137	.3118	.3099	.3080	.3062	.3043	.3025	.3007
100.0	.2989	.2971	.2953	.2935	.2917	.2900	.2882	.2865	.2848	.2831
105.0	.2814	.2797	.2780	.2763	.2746	.2730	.2713	.2697	.2681	.2665
110.0	.2649	.2633	.2617	.2601	.2585	.2570	.2554	.2539	.2524	.2509
115.0	.2493	.2478	.2464	.2449	.2434	.2419	.2405	.2390	.2376	.2362
120.0	.2347	.2333	.2319	.2305	.2291	.2278	.2264	.2250	.2237	.2223
125.0	.2210	.2196	.2183	.2170	.2157	.2144	.2131	.2118	.2106	.2093
130.0	.2080	.2068	.2055	.2043	.2031	.2018	.2006	.1994	.1982	.1970
135.0	.1958	.1947	.1935	.1923	.1912	.1900	.1889	.1877	.1866	.1855
140.0	.1844	.1832	.1821	.1810	.1800	.1789	.1778	.1767	.1757	.1746
145.0	.1736	.1725	.1715	.1704	.1694	.1684	.1674	.1664	.1654	.1644
150.0	.1634	.1624	.1614	.1604	.1595	.1585	.1576	.1566	.1557	.1547
155.0	.1538	.1529	.1520	.1510	.1501	.1492	.1483	.1474	.1466	.1457
160.0	.1448	.1439	.1431	.1422	.1413	.1405	.1396	.1388	.1380	.1371
165.0	.1363	.1355	.1347	.1339	.1331	.1322	.1315	.1307	.1299	.1291
170.0	.1283	.1275	.1268	.1260	.1253	.1245	.1237	.1230	.1223	.1215
175.0	.1208	.1201	.1193	.1186	.1179	.1172	.1165	.1158	.1151	.1144
180.0	.1137	.1130	.1123	.1117	.1110	.1103	.1097	.1090	.1083	.1077
185.0	.1070	.1064	.1058	.1051	.1045	.1039	.1032	.1026	.1020	.1014
190.0	.1008	.1002	.0996	.0990	.0984	.0978	.0972	.0966	.0960	.0954

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HALF-LIFE 8.08 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9964	.9928	.9893	.9858	.9822	.9787	.9752	.9718	.9683	.9648	.9614
.50	.9580	.9545	.9511	.9477	.9444	.9410	.9376	.9343	.9310	.9276	.9243	.9210
1.00	.9177	.9145	.9112	.9080	.9047	.9015	.8983	.8951	.8919	.8887	.8855	.8824
1.50	.8792	.8761	.8729	.8698	.8667	.8636	.8606	.8575	.8544	.8514	.8483	.8453
2.00	.8423	.8393	.8363	.8333	.8303	.8274	.8244	.8215	.8185	.8156	.8127	.8098
2.50	.8069	.8040	.8012	.7983	.7955	.7926	.7898	.7870	.7842	.7814	.7786	.7758
3.00	.7730	.7703	.7675	.7648	.7621	.7593	.7566	.7539	.7512	.7486	.7459	.7432
3.50	.7406	.7379	.7353	.7327	.7301	.7275	.7249	.7223	.7197	.7171	.7146	.7120
4.00	.7095	.7070	.7044	.7019	.6994	.6969	.6944	.6920	.6895	.6870	.6846	.6821
4.50	.6797	.6773	.6749	.6724	.6700	.6677	.6653	.6629	.6605	.6582	.6558	.6535
5.00	.6512	.6488	.6465	.6442	.6419	.6396	.6373	.6351	.6328	.6305	.6283	.6260
5.50	.6238	.6216	.6194	.6172	.6150	.6128	.6106	.6084	.6062	.6041	.6019	.5998
6.00	.5976	.5955	.5934	.5912	.5891	.5870	.5849	.5829	.5808	.5787	.5766	.5746
6.50	.5725	.5705	.5684	.5664	.5644	.5624	.5604	.5584	.5564	.5544	.5524	.5505
7.00	.5485	.5465	.5446	.5426	.5407	.5388	.5368	.5349	.5330	.5311	.5292	.5273
7.50	.5255	.5236	.5217	.5199	.5180	.5161	.5143	.5125	.5106	.5088	.5070	.5052
8.00	.5034	.5016	.4998	.4980	.4962	.4945	.4927	.4910	.4892	.4875	.4857	.4840
8.50	.4823	.4805	.4788	.4771	.4754	.4737	.4720	.4703	.4687	.4670	.4653	.4637
9.00	.4620	.4604	.4587	.4571	.4554	.4538	.4522	.4506	.4490	.4474	.4458	.4442
9.50	.4426	.4410	.4395	.4379	.4363	.4348	.4332	.4317	.4301	.4286	.4271	.4255
10.00	.4240	.4225	.4210	.4195	.4180	.4165	.4150	.4135	.4121	.4106	.4091	.4077
10.50	.4062	.4048	.4033	.4019	.4004	.3990	.3976	.3962	.3948	.3934	.3920	.3906
11.00	.3892	.3878	.3864	.3850	.3836	.3823	.3809	.3795	.3782	.3768	.3755	.3742
11.50	.3728	.3715	.3702	.3688	.3675	.3662	.3649	.3636	.3623	.3610	.3597	.3584
12.00	.3572	.3559	.3546	.3534	.3521	.3508	.3496	.3483	.3471	.3459	.3446	.3434
12.50	.3422	.3409	.3397	.3385	.3373	.3361	.3349	.3337	.3325	.3313	.3301	.3290
13.00	.3278	.3266	.3255	.3243	.3231	.3220	.3208	.3197	.3186	.3174	.3163	.3152
13.50	.3140	.3129	.3118	.3107	.3096	.3085	.3074	.3063	.3052	.3041	.3030	.3019
14.00	.3008	.2998	.2987	.2976	.2966	.2955	.2945	.2934	.2924	.2913	.2903	.2892
14.50	.2882	.2872	.2862	.2851	.2841	.2831	.2821	.2811	.2801	.2791	.2781	.2771
15.00	.2761	.2751	.2741	.2732	.2722	.2712	.2703	.2693	.2683	.2674	.2664	.2655
15.50	.2645	.2636	.2626	.2617	.2608	.2598	.2589	.2580	.2571	.2561	.2552	.2543
16.00	.2534	.2525	.2516	.2507	.2498	.2489	.2480	.2471	.2463	.2454	.2445	.2436
16.50	.2428	.2419	.2410	.2402	.2393	.2385	.2376	.2368	.2359	.2351	.2342	.2334
17.00	.2326	.2317	.2309	.2301	.2293	.2285	.2276	.2268	.2260	.2252	.2244	.2236
17.50	.2228	.2220	.2212	.2204	.2196	.2189	.2181	.2173	.2165	.2157	.2150	.2142
18.00	.2134	.2127	.2119	.2112	.2104	.2097	.2089	.2082	.2074	.2067	.2060	.2052
18.50	.2045	.2038	.2030	.2023	.2016	.2009	.2001	.1994	.1987	.1980	.1973	.1966
19.00	.1959	.1952	.1945	.1938	.1931	.1924	.1917	.1911	.1904	.1897	.1890	.1883
19.50	.1877	.1870	.1863	.1857	.1850	.1843	.1837	.1830	.1824	.1817	.1811	.1804

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HALF-LIFE 8.08 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
20.00	.1798	.1791	.1785	.1779	.1772	.1766	.1760	.1753	.1747	.1741	.1735	.1729
20.50	.1722	.1716	.1710	.1704	.1698	.1692	.1686	.1680	.1674	.1668	.1662	.1656
21.00	.1650	.1644	.1638	.1632	.1627	.1621	.1615	.1609	.1604	.1598	.1592	.1586
21.50	.1581	.1575	.1569	.1564	.1558	.1553	.1547	.1542	.1536	.1531	.1525	.1520
22.00	.1514	.1509	.1504	.1498	.1493	.1488	.1482	.1477	.1472	.1466	.1461	.1456
22.50	.1451	.1446	.1440	.1435	.1430	.1425	.1420	.1415	.1410	.1405	.1400	.1395
23.00	.1390	.1385	.1380	.1375	.1370	.1365	.1360	.1355	.1351	.1346	.1341	.1336
23.50	.1331	.1327	.1322	.1317	.1313	.1308	.1303	.1299	.1294	.1289	.1285	.1280
24.00	.1276	.1271	.1266	.1262	.1257	.1253	.1248	.1244	.1240	.1235	.1231	.1226
24.50	.1222	.1218	.1213	.1209	.1205	.1200	.1196	.1192	.1187	.1183	.1179	.1175
25.00	.1171	.1166	.1162	.1158	.1154	.1150	.1146	.1142	.1138	.1134	.1130	.1125
25.50	.1121	.1117	.1113	.1109	.1106	.1102	.1098	.1094	.1090	.1086	.1082	.1078
26.00	.1074	.1071	.1067	.1063	.1059	.1055	.1052	.1048	.1044	.1040	.1037	.1033
26.50	.1029	.1026	.1022	.1018	.1015	.1011	.1007	.1004	.1000	.0997	.0993	.0990
27.00	.0986	.0982	.0979	.0975	.0972	.0969	.0965	.0962	.0958	.0955	.0951	.0948
27.50	.0945	.0941	.0938	.0934	.0931	.0928	.0925	.0921	.0918	.0915	.0911	.0908
28.00	.0905	.0902	.0898	.0895	.0892	.0889	.0886	.0883	.0879	.0876	.0873	.0870
28.50	.0867	.0864	.0861	.0858	.0855	.0852	.0848	.0845	.0842	.0839	.0836	.0833
29.00	.0830	.0827	.0825	.0822	.0819	.0816	.0813	.0810	.0807	.0804	.0801	.0798
29.50	.0796	.0793	.0790	.0787	.0784	.0781	.0779	.0776	.0773	.0770	.0768	.0765
30.00	.0762	.0759	.0757	.0754	.0751	.0749	.0746	.0743	.0741	.0738	.0735	.0733
30.50	.0730	.0728	.0725	.0722	.0720	.0717	.0715	.0712	.0710	.0707	.0704	.0702
31.00	.0699	.0697	.0694	.0692	.0690	.0687	.0685	.0682	.0680	.0677	.0675	.0672
31.50	.0670	.0668	.0665	.0663	.0661	.0658	.0656	.0653	.0651	.0649	.0647	.0644
32.00	.0642	.0640	.0637	.0635	.0633	.0631	.0628	.0626	.0624	.0622	.0619	.0617
32.50	.0615	.0613	.0611	.0608	.0606	.0604	.0602	.0600	.0598	.0595	.0593	.0591
33.00	.0589	.0587	.0585	.0583	.0581	.0579	.0577	.0575	.0572	.0570	.0568	.0566
33.50	.0564	.0562	.0560	.0558	.0556	.0554	.0552	.0550	.0548	.0546	.0545	.0543
34.00	.0541	.0539	.0537	.0535	.0533	.0531	.0529	.0527	.0525	.0524	.0522	.0520
34.50	.0518	.0516	.0514	.0512	.0511	.0509	.0507	.0505	.0503	.0502	.0500	.0498
35.00	.0496	.0494	.0493	.0491	.0489	.0487	.0486	.0484	.0482	.0480	.0479	.0477
35.50	.0475	.0474	.0472	.0470	.0469	.0467	.0465	.0464	.0462	.0460	.0459	.0457
36.00	.0455	.0454	.0452	.0450	.0449	.0447	.0446	.0444	.0442	.0441	.0439	.0438
36.50	.0436	.0435	.0433	.0432	.0430	.0428	.0427	.0425	.0424	.0422	.0421	.0419
37.00	.0418	.0416	.0415	.0413	.0412	.0410	.0409	.0408	.0406	.0405	.0403	.0402
37.50	.0400	.0399	.0397	.0396	.0395	.0393	.0392	.0390	.0389	.0388	.0386	.0385
38.00	.0383	.0382	.0381	.0379	.0378	.0377	.0375	.0374	.0373	.0371	.0370	.0369
38.50	.0367	.0366	.0365	.0363	.0362	.0361	.0360	.0358	.0357	.0356	.0354	.0353
39.00	.0352	.0351	.0349	.0348	.0347	.0346	.0344	.0343	.0342	.0341	.0340	.0338
39.50	.0337	.0336	.0335	.0333	.0332	.0331	.0330	.0329	.0328	.0326	.0325	.0324

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HALF-LIFE 8.08 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
40.00	.0323	.0322	.0321	.0319	.0318	.0317	.0316	.0315	.0314	.0313	.0312	.0310
40.50	.0309	.0308	.0307	.0306	.0305	.0304	.0303	.0302	.0301	.0300	.0298	.0297
41.00	.0296	.0295	.0294	.0293	.0292	.0291	.0290	.0289	.0288	.0287	.0286	.0285
41.50	.0284	.0283	.0282	.0281	.0280	.0279	.0278	.0277	.0276	.0275	.0274	.0273
42.00	.0272	.0271	.0270	.0269	.0268	.0267	.0266	.0265	.0264	.0263	.0262	.0261
42.50	.0260	.0260	.0259	.0258	.0257	.0256	.0255	.0254	.0253	.0252	.0251	.0250
43.00	.0250	.0249	.0248	.0247	.0246	.0245	.0244	.0243	.0242	.0242	.0241	.0240
43.50	.0239	.0238	.0237	.0236	.0236	.0235	.0234	.0233	.0232	.0231	.0231	.0230
44.00	.0229	.0228	.0227	.0227	.0226	.0225	.0224	.0223	.0223	.0222	.0221	.0220
44.50	.0219	.0219	.0218	.0217	.0216	.0215	.0215	.0214	.0213	.0212	.0212	.0211
45.00	.0210	.0209	.0209	.0208	.0207	.0206	.0206	.0205	.0204	.0203	.0203	.0202
45.50	.0201	.0201	.0200	.0199	.0198	.0198	.0197	.0196	.0196	.0195	.0194	.0193
46.00	.0193	.0192	.0191	.0191	.0190	.0189	.0189	.0188	.0187	.0187	.0186	.0185
46.50	.0185	.0184	.0183	.0183	.0182	.0181	.0181	.0180	.0179	.0179	.0178	.0178
47.00	.0177	.0176	.0176	.0175	.0174	.0174	.0173	.0173	.0172	.0171	.0171	.0170
47.50	.0169	.0169	.0168	.0168	.0167	.0166	.0166	.0165	.0165	.0164	.0163	.0163
48.00	.0162	.0162	.0161	.0161	.0160	.0159	.0159	.0158	.0158	.0157	.0157	.0156
48.50	.0155	.0155	.0154	.0154	.0153	.0153	.0152	.0152	.0151	.0151	.0150	.0149
49.00	.0149	.0148	.0148	.0147	.0147	.0146	.0146	.0145	.0145	.0144	.0144	.0143
49.50	.0143	.0142	.0142	.0141	.0141	.0140	.0140	.0139	.0139	.0138	.0138	.0137
50.00	.0137	.0136	.0136	.0135	.0135	.0134	.0134	.0133	.0133	.0132	.0132	.0131
50.50	.0131	.0130	.0130	.0129	.0129	.0129	.0128	.0128	.0127	.0127	.0126	.0126
51.00	.0125	.0125	.0124	.0124	.0124	.0123	.0123	.0122	.0122	.0121	.0121	.0121
51.50	.0120	.0120	.0119	.0119	.0118	.0118	.0118	.0117	.0117	.0116	.0116	.0115
52.00	.0115	.0115	.0114	.0114	.0113	.0113	.0113	.0112	.0112	.0111	.0111	.0111
52.50	.0110	.0110	.0109	.0109	.0109	.0108	.0108	.0107	.0107	.0107	.0106	.0106
53.00	.0106	.0105	.0105	.0104	.0104	.0104	.0103	.0103	.0103	.0102	.0102	.0101
53.50	.0101	.0101	.0100	.0100	.0100	.0099	.0099	.0099	.0098	.0098	.0098	.0097

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HALF-LIFE 2.30 HOURS CALCULATION INTERVAL 1.0 MINUTES

HOURS	MINUTES 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9949	.9900	.9850	.9801	.9751	.9703	.9654	.9606	.9558	.9510	.9462
.20	.9415	.9367	.9320	.9274	.9227	.9181	.9135	.9089	.9044	.8998	.8953	.8908
.40	.8864	.8819	.8775	.8731	.8688	.8644	.8601	.8558	.8515	.8472	.8430	.8387
.60	.8345	.8304	.8262	.8221	.8179	.8138	.8098	.8057	.8017	.7976	.7937	.7897
.80	.7857	.7818	.7779	.7740	.7701	.7662	.7624	.7586	.7548	.7510	.7472	.7435
1.00	.7398	.7360	.7324	.7287	.7250	.7214	.7178	.7142	.7106	.7071	.7035	.7000
1.20	.6965	.6930	.6895	.6861	.6826	.6792	.6758	.6724	.6690	.6657	.6624	.6590
1.40	.6557	.6525	.6492	.6459	.6427	.6395	.6363	.6331	.6299	.6268	.6236	.6205
1.60	.6174	.6143	.6112	.6081	.6051	.6021	.5991	.5960	.5931	.5901	.5871	.5842
1.80	.5813	.5784	.5755	.5726	.5697	.5668	.5640	.5612	.5584	.5556	.5528	.5500
2.00	.5473	.5445	.5418	.5391	.5364	.5337	.5310	.5284	.5257	.5231	.5205	.5178
2.20	.5152	.5127	.5101	.5075	.5050	.5025	.5000	.4974	.4950	.4925	.4900	.4876
2.40	.4851	.4827	.4803	.4779	.4755	.4731	.4707	.4683	.4660	.4637	.4613	.4590
2.60	.4567	.4544	.4522	.4499	.4476	.4454	.4432	.4409	.4387	.4365	.4344	.4322
2.80	.4300	.4279	.4257	.4236	.4215	.4193	.4172	.4152	.4131	.4110	.4089	.4069
3.00	.4049	.4028	.4008	.3988	.3968	.3948	.3928	.3909	.3889	.3870	.3850	.3831
3.20	.3812	.3793	.3774	.3755	.3736	.3717	.3699	.3680	.3662	.3643	.3625	.3607
3.40	.3589	.3571	.3553	.3535	.3517	.3500	.3482	.3465	.3447	.3430	.3413	.3396
3.60	.3379	.3362	.3345	.3328	.3312	.3295	.3278	.3262	.3246	.3229	.3213	.3197
3.80	.3181	.3165	.3149	.3134	.3118	.3102	.3087	.3071	.3056	.3040	.3025	.3010
4.00	.2995	.2980	.2965	.2950	.2935	.2921	.2906	.2892	.2877	.2863	.2848	.2834
4.20	.2820	.2806	.2792	.2778	.2764	.2750	.2736	.2722	.2709	.2695	.2682	.2668
4.40	.2655	.2642	.2628	.2615	.2602	.2589	.2576	.2563	.2550	.2537	.2525	.2512
4.60	.2500	.2487	.2475	.2462	.2450	.2438	.2425	.2413	.2401	.2389	.2377	.2365
4.80	.2353	.2341	.2330	.2318	.2306	.2295	.2283	.2272	.2261	.2249	.2238	.2227
5.00	.2216	.2204	.2193	.2182	.2172	.2161	.2150	.2139	.2128	.2118	.2107	.2096
5.20	.2086	.2076	.2065	.2055	.2044	.2034	.2024	.2014	.2004	.1994	.1984	.1974
5.40	.1964	.1954	.1944	.1935	.1925	.1915	.1906	.1896	.1887	.1877	.1868	.1858
5.60	.1849	.1840	.1831	.1821	.1812	.1803	.1794	.1785	.1776	.1767	.1758	.1750
5.80	.1741	.1732	.1723	.1715	.1706	.1698	.1689	.1681	.1672	.1664	.1656	.1647
6.00	.1639	.1631	.1623	.1614	.1606	.1598	.1590	.1582	.1574	.1567	.1559	.1551
6.20	.1543	.1535	.1528	.1520	.1512	.1505	.1497	.1490	.1482	.1475	.1467	.1460
6.40	.1453	.1446	.1438	.1431	.1424	.1417	.1410	.1403	.1396	.1389	.1382	.1375
6.60	.1368	.1361	.1354	.1347	.1341	.1334	.1327	.1321	.1314	.1307	.1301	.1294
6.80	.1288	.1281	.1275	.1268	.1262	.1256	.1250	.1243	.1237	.1231	.1225	.1219
7.00	.1212	.1206	.1200	.1194	.1188	.1182	.1176	.1170	.1165	.1159	.1153	.1147
7.20	.1141	.1136	.1130	.1124	.1119	.1113	.1108	.1102	.1096	.1091	.1086	.1080
7.40	.1075	.1069	.1064	.1059	.1053	.1048	.1043	.1038	.1032	.1027	.1022	.1017
7.60	.1012	.1007	.1002	.0997	.0992	.0987	.0982	.0977	.0972	.0967	.0962	.0957

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HALF-LIFE 6.70 HOURS CALCULATION INTERVAL 5.0 MINUTES

HOURS	MINUTES 0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0
0.00	1.0000	.9914	.9829	.9744	.9661	.9578	.9495	.9414	.9333	.9253	.9173	.9095
1.00	.9017	.8939	.8863	.8786	.8711	.8636	.8562	.8489	.8416	.8343	.8272	.8201
2.00	.8130	.8061	.7991	.7923	.7855	.7787	.7721	.7654	.7589	.7523	.7459	.7395
3.00	.7331	.7268	.7206	.7144	.7083	.7022	.6962	.6902	.6843	.6784	.6726	.6668
4.00	.6611	.6554	.6498	.6442	.6387	.6332	.6277	.6224	.6170	.6117	.6065	.6013
5.00	.5961	.5910	.5859	.5809	.5759	.5709	.5660	.5612	.5564	.5516	.5469	.5422
6.00	.5375	.5329	.5283	.5238	.5193	.5148	.5104	.5060	.5017	.4974	.4931	.4889
7.00	.4847	.4805	.4764	.4723	.4682	.4642	.4602	.4563	.4524	.4485	.4446	.4408
8.00	.4370	.4333	.4296	.4259	.4222	.4186	.4150	.4114	.4079	.4044	.4009	.3975
9.00	.3941	.3907	.3873	.3840	.3807	.3774	.3742	.3710	.3678	.3646	.3615	.3584
10.00	.3553	.3523	.3493	.3463	.3433	.3403	.3374	.3345	.3317	.3288	.3260	.3232
11.00	.3204	.3177	.3149	.3122	.3095	.3069	.3043	.3016	.2991	.2965	.2939	.2914
12.00	.2889	.2864	.2840	.2815	.2791	.2767	.2743	.2720	.2697	.2673	.2650	.2628
13.00	.2605	.2583	.2561	.2539	.2517	.2495	.2474	.2453	.2431	.2411	.2390	.2369
14.00	.2349	.2329	.2309	.2289	.2269	.2250	.2231	.2211	.2192	.2174	.2155	.2136
15.00	.2118	.2100	.2082	.2064	.2046	.2029	.2011	.1994	.1977	.1960	.1943	.1926
16.00	.1910	.1893	.1877	.1861	.1845	.1829	.1814	.1798	.1783	.1767	.1752	.1737
17.00	.1722	.1707	.1693	.1678	.1664	.1649	.1635	.1621	.1607	.1594	.1580	.1566
18.00	.1553	.1539	.1526	.1513	.1500	.1487	.1475	.1462	.1449	.1437	.1425	.1412
19.00	.1400	.1388	.1376	.1364	.1353	.1341	.1330	.1318	.1307	.1296	.1284	.1273
20.00	.1263	.1252	.1241	.1230	.1220	.1209	.1199	.1189	.1178	.1168	.1158	.1148
21.00	.1138	.1129	.1119	.1109	.1100	.1090	.1081	.1072	.1062	.1053	.1044	.1035
22.00	.1026	.1018	.1009	.1000	.0992	.0983	.0975	.0966	.0958	.0950	.0942	.0934
23.00	.0926	.0918	.0910	.0902	.0894	.0886	.0879	.0871	.0864	.0856	.0849	.0842
24.00	.0834	.0827	.0820	.0813	.0806	.0799	.0792	.0786	.0779	.0772	.0766	.0759
25.00	.0752	.0746	.0740	.0733	.0727	.0721	.0714	.0708	.0702	.0696	.0690	.0684
26.00	.0678	.0673	.0667	.0661	.0655	.0650	.0644	.0639	.0633	.0628	.0622	.0617
27.00	.0612	.0606	.0601	.0596	.0591	.0586	.0581	.0576	.0571	.0566	.0561	.0556
28.00	.0552	.0547	.0542	.0537	.0533	.0528	.0524	.0519	.0515	.0510	.0506	.0502
29.00	.0497	.0493	.0489	.0485	.0480	.0476	.0472	.0468	.0464	.0460	.0456	.0452
30.00	.0448	.0445	.0441	.0437	.0433	.0429	.0426	.0422	.0418	.0415	.0411	.0408
31.00	.0404	.0401	.0397	.0394	.0391	.0387	.0384	.0381	.0377	.0374	.0371	.0368
32.00	.0364	.0361	.0358	.0355	.0352	.0349	.0346	.0343	.0340	.0337	.0334	.0331
33.00	.0329	.0326	.0323	.0320	.0317	.0315	.0312	.0309	.0307	.0304	.0301	.0299
34.00	.0296	.0294	.0291	.0289	.0286	.0284	.0281	.0279	.0276	.0274	.0272	.0269
35.00	.0267	.0265	.0263	.0260	.0258	.0256	.0254	.0251	.0249	.0247	.0245	.0243
36.00	.0241	.0239	.0237	.0235	.0233	.0231	.0229	.0227	.0225	.0223	.0221	.0219
37.00	.0217	.0215	.0213	.0212	.0210	.0208	.0206	.0204	.0203	.0201	.0199	.0197
38.00	.0196	.0194	.0192	.0191	.0189	.0187	.0186	.0184	.0183	.0181	.0179	.0178
39.00	.0176	.0175	.0173	.0172	.0170	.0169	.0167	.0166	.0165	.0163	.0162	.0160
40.00	.0159	.0158	.0156	.0155	.0154	.0152	.0151	.0150	.0148	.0147	.0146	.0145
41.00	.0143	.0142	.0141	.0140	.0138	.0137	.0136	.0135	.0134	.0133	.0131	.0130
42.00	.0129	.0128	.0127	.0126	.0125	.0124	.0123	.0122	.0121	.0120	.0118	.0117
43.00	.0116	.0115	.0114	.0113	.0112	.0112	.0111	.0110	.0109	.0108	.0107	.0106
44.00	.0105	.0104	.0103	.0102	.0101	.0101	.0100	.0099	.0098	.0097	.0096	.0095

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HALF-LIFE 74.37 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.00	1.0000	.9907	.9815	.9724	.9634	.9544	.9456	.9368	.9281	.9195
10.00	.9110	.9025	.8941	.8858	.8776	.8695	.8614	.8534	.8455	.8377
20.00	.8299	.8222	.8146	.8070	.7995	.7921	.7847	.7775	.7703	.7631
30.00	.7560	.7490	.7421	.7352	.7284	.7216	.7149	.7083	.7017	.6952
40.00	.6887	.6824	.6760	.6698	.6635	.6574	.6513	.6452	.6393	.6333
50.00	.6274	.6216	.6159	.6101	.6045	.5989	.5933	.5878	.5824	.5770
60.00	.5716	.5663	.5611	.5558	.5507	.5456	.5405	.5355	.5305	.5256
70.00	.5207	.5159	.5111	.5064	.5017	.4970	.4924	.4878	.4833	.4788
80.00	.4744	.4700	.4656	.4613	.4570	.4528	.4486	.4444	.4403	.4362
90.00	.4322	.4282	.4242	.4203	.4164	.4125	.4087	.4049	.4011	.3974
100.00	.3937	.3901	.3864	.3828	.3793	.3758	.3723	.3688	.3654	.3620
110.00	.3587	.3553	.3520	.3488	.3455	.3423	.3392	.3360	.3329	.3298
120.00	.3267	.3237	.3207	.3177	.3148	.3119	.3090	.3061	.3033	.3004
130.00	.2977	.2949	.2922	.2895	.2868	.2841	.2815	.2789	.2763	.2737
140.00	.2712	.2687	.2662	.2637	.2612	.2588	.2564	.2540	.2517	.2493
150.00	.2470	.2447	.2425	.2402	.2380	.2358	.2336	.2314	.2293	.2272
160.00	.2250	.2230	.2209	.2188	.2168	.2148	.2128	.2108	.2089	.2069
170.00	.2050	.2031	.2012	.1994	.1975	.1957	.1939	.1921	.1903	.1885
180.00	.1868	.1850	.1833	.1816	.1799	.1783	.1766	.1750	.1733	.1717
190.00	.1701	.1686	.1670	.1654	.1639	.1624	.1609	.1594	.1579	.1564
200.00	.1550	.1536	.1521	.1507	.1493	.1479	.1466	.1452	.1439	.1425
210.00	.1412	.1399	.1386	.1373	.1360	.1348	.1335	.1323	.1310	.1298
220.00	.1286	.1274	.1262	.1251	.1239	.1228	.1216	.1205	.1194	.1183
230.00	.1172	.1161	.1150	.1139	.1129	.1118	.1108	.1098	.1088	.1077
240.00	.1067	.1058	.1048	.1038	.1028	.1019	.1009	.1000	.0991	.0982

FE - 55

HALF-LIFE 2.70 YEARS CALCULATION INTERVAL 10.0 DAYS

DAYS	0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
0.0	1.0000	.9929	.9860	.9791	.9722	.9654	.9586	.9519	.9452	.9386
100.0	.9320	.9255	.9190	.9126	.9062	.8998	.8935	.8873	.8810	.8749
200.0	.8687	.8626	.8566	.8506	.8446	.8387	.8328	.8270	.8212	.8154
300.0	.8097	.8040	.7984	.7928	.7873	.7817	.7763	.7708	.7654	.7601
400.0	.7547	.7494	.7442	.7390	.7338	.7286	.7235	.7185	.7134	.7084
500.0	.7035	.6985	.6936	.6888	.6839	.6791	.6744	.6697	.6650	.6603
600.0	.6557	.6511	.6465	.6420	.6375	.6330	.6286	.6242	.6198	.6155
700.0	.6111	.6069	.6026	.5984	.5942	.5900	.5859	.5818	.5777	.5737
800.0	.5696	.5656	.5617	.5577	.5538	.5499	.5461	.5423	.5385	.5347
900.0	.5309	.5272	.5235	.5199	.5162	.5126	.5090	.5054	.5019	.4984
1000.0	.4949	.4914	.4880	.4845	.4811	.4778	.4744	.4711	.4678	.4645
1100.0	.4613	.4580	.4548	.4516	.4485	.4453	.4422	.4391	.4360	.4330
1200.0	.4299	.4269	.4239	.4210	.4180	.4151	.4122	.4093	.4064	.4036
1300.0	.4007	.3979	.3951	.3924	.3896	.3869	.3842	.3815	.3788	.3761
1400.0	.3735	.3709	.3683	.3657	.3631	.3606	.3581	.3556	.3531	.3506
1500.0	.3481	.3457	.3433	.3409	.3385	.3361	.3337	.3314	.3291	.3268
1600.0	.3245	.3222	.3200	.3177	.3155	.3133	.3111	.3089	.3067	.3046
1700.0	.3024	.3003	.2982	.2961	.2941	.2920	.2899	.2879	.2859	.2839
1800.0	.2819	.2799	.2780	.2760	.2741	.2722	.2703	.2684	.2665	.2646
1900.0	.2628	.2609	.2591	.2573	.2555	.2537	.2519	.2501	.2484	.2466
2000.0	.2449	.2432	.2415	.2398	.2381	.2364	.2348	.2331	.2315	.2299
2100.0	.2283	.2267	.2251	.2235	.2219	.2204	.2188	.2173	.2158	.2143
2200.0	.2128	.2113	.2098	.2083	.2069	.2054	.2040	.2025	.2011	.1997
2300.0	.1983	.1969	.1955	.1942	.1928	.1915	.1901	.1888	.1875	.1861
2400.0	.1848	.1835	.1823	.1810	.1797	.1784	.1772	.1760	.1747	.1735
2500.0	.1723	.1711	.1699	.1687	.1675	.1663	.1652	.1640	.1628	.1617
2600.0	.1606	.1594	.1583	.1572	.1561	.1550	.1539	.1529	.1518	.1507
2700.0	.1497	.1486	.1476	.1465	.1455	.1445	.1435	.1425	.1415	.1405
2800.0	.1395	.1385	.1375	.1366	.1356	.1347	.1337	.1328	.1319	.1309
2900.0	.1300	.1291	.1282	.1273	.1264	.1255	.1246	.1238	.1229	.1220
3000.0	.1212	.1203	.1195	.1187	.1178	.1170	.1162	.1154	.1146	.1137
3100.0	.1130	.1122	.1114	.1106	.1098	.1090	.1083	.1075	.1068	.1060
3200.0	.1053	.1045	.1038	.1031	.1024	.1016	.1009	.1002	.0995	.0988

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HALF-LIFE 47.10 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
0.00	1.0000	.9951	.9902	.9853	.9805	.9757	.9709	.9662	.9615	.9568	.9521	.9474
4.00	.9428	.9382	.9336	.9290	.9245	.9199	.9154	.9110	.9065	.9021	.8976	.8933
8.00	.8889	.8845	.8802	.8759	.8716	.8673	.8631	.8589	.8547	.8505	.8463	.8422
12.00	.8381	.8340	.8299	.8258	.8218	.8178	.8138	.8098	.8058	.8019	.7979	.7940
16.00	.7902	.7863	.7824	.7786	.7748	.7710	.7672	.7635	.7597	.7560	.7523	.7486
20.00	.7450	.7413	.7377	.7341	.7305	.7269	.7234	.7198	.7163	.7128	.7093	.7058
24.00	.7024	.6990	.6955	.6921	.6887	.6854	.6820	.6787	.6754	.6721	.6688	.6655
28.00	.6622	.6590	.6558	.6526	.6494	.6462	.6430	.6399	.6367	.6336	.6305	.6274
32.00	.6244	.6213	.6183	.6153	.6122	.6092	.6063	.6033	.6003	.5974	.5945	.5916
36.00	.5887	.5858	.5829	.5801	.5772	.5744	.5716	.5688	.5660	.5632	.5605	.5578
40.00	.5550	.5523	.5496	.5469	.5442	.5416	.5389	.5363	.5337	.5310	.5284	.5259
44.00	.5233	.5207	.5182	.5156	.5131	.5106	.5081	.5056	.5031	.5007	.4982	.4958
48.00	.4934	.4910	.4886	.4862	.4838	.4814	.4791	.4767	.4744	.4721	.4698	.4675
52.00	.4652	.4629	.4606	.4584	.4561	.4539	.4517	.4495	.4473	.4451	.4429	.4407
56.00	.4386	.4364	.4343	.4322	.4300	.4279	.4258	.4238	.4217	.4196	.4176	.4155
60.00	.4135	.4115	.4095	.4075	.4055	.4035	.4015	.3995	.3976	.3956	.3937	.3918
64.00	.3899	.3879	.3860	.3842	.3823	.3804	.3785	.3767	.3748	.3730	.3712	.3694
68.00	.3676	.3658	.3640	.3622	.3604	.3587	.3569	.3552	.3534	.3517	.3500	.3483
72.00	.3465	.3449	.3432	.3415	.3398	.3382	.3365	.3348	.3332	.3316	.3300	.3283
76.00	.3267	.3251	.3235	.3220	.3204	.3188	.3173	.3157	.3142	.3126	.3111	.3096
80.00	.3081	.3065	.3050	.3036	.3021	.3006	.2991	.2977	.2962	.2947	.2933	.2919
84.00	.2904	.2890	.2876	.2862	.2848	.2834	.2820	.2806	.2793	.2779	.2765	.2752
88.00	.2738	.2725	.2712	.2698	.2685	.2672	.2659	.2646	.2633	.2620	.2607	.2594
92.00	.2582	.2569	.2557	.2544	.2532	.2519	.2507	.2495	.2482	.2470	.2458	.2446
96.00	.2434	.2422	.2410	.2399	.2387	.2375	.2364	.2352	.2340	.2329	.2318	.2306
100.00	.2295	.2284	.2273	.2261	.2250	.2239	.2228	.2217	.2207	.2196	.2185	.2174
104.00	.2164	.2153	.2143	.2132	.2122	.2111	.2101	.2091	.2080	.2070	.2060	.2050
108.00	.2040	.2030	.2020	.2010	.2000	.1991	.1981	.1971	.1961	.1952	.1942	.1933
112.00	.1923	.1914	.1905	.1895	.1886	.1877	.1868	.1858	.1849	.1840	.1831	.1822
116.00	.1813	.1805	.1796	.1787	.1778	.1769	.1761	.1752	.1744	.1735	.1727	.1718
120.00	.1710	.1701	.1693	.1685	.1676	.1668	.1660	.1652	.1644	.1636	.1628	.1620
124.00	.1612	.1604	.1596	.1588	.1581	.1573	.1565	.1558	.1550	.1542	.1535	.1527
128.00	.1520	.1512	.1505	.1498	.1490	.1483	.1476	.1468	.1461	.1454	.1447	.1440
132.00	.1433	.1426	.1419	.1412	.1405	.1398	.1391	.1384	.1378	.1371	.1364	.1358
136.00	.1351	.1344	.1338	.1331	.1325	.1318	.1312	.1305	.1299	.1293	.1286	.1280
140.00	.1274	.1267	.1261	.1255	.1249	.1243	.1237	.1231	.1225	.1219	.1213	.1207
144.00	.1201	.1195	.1189	.1183	.1177	.1172	.1166	.1160	.1155	.1149	.1143	.1138
148.00	.1132	.1127	.1121	.1116	.1110	.1105	.1099	.1094	.1089	.1083	.1078	.1073
152.00	.1067	.1062	.1057	.1052	.1047	.1042	.1036	.1031	.1026	.1021	.1016	.1011
156.00	.1006	.1001	.0997	.0992	.0987	.0982	.0977	.0972	.0968	.0963	.0958	.0953

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HALF-LIFE 47.10 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
160.00	.0949	.0944	.0940	.0935	.0930	.0926	.0921	.0917	.0912	.0908	.0903	.0899
164.00	.0895	.0890	.0886	.0881	.0877	.0873	.0869	.0864	.0860	.0856	.0852	.0848
168.00	.0843	.0839	.0835	.0831	.0827	.0823	.0819	.0815	.0811	.0807	.0803	.0799
172.00	.0795	.0791	.0787	.0783	.0780	.0776	.0772	.0769	.0764	.0761	.0757	.0753
176.00	.0750	.0746	.0742	.0739	.0735	.0731	.0728	.0724	.0721	.0717	.0714	.0710
180.00	.0707	.0703	.0700	.0696	.0693	.0690	.0686	.0683	.0680	.0676	.0673	.0670
184.00	.0666	.0663	.0660	.0657	.0653	.0650	.0647	.0644	.0641	.0638	.0634	.0631
188.00	.0628	.0625	.0622	.0619	.0616	.0613	.0610	.0607	.0604	.0601	.0598	.0595
192.00	.0592	.0589	.0586	.0584	.0581	.0578	.0575	.0572	.0569	.0567	.0564	.0561
196.00	.0558	.0556	.0553	.0550	.0548	.0545	.0542	.0540	.0537	.0534	.0532	.0529
200.00	.0526	.0524	.0521	.0519	.0516	.0514	.0511	.0509	.0506	.0504	.0501	.0499
204.00	.0496	.0494	.0491	.0489	.0487	.0484	.0482	.0480	.0477	.0475	.0473	.0470
208.00	.0468	.0466	.0463	.0461	.0459	.0457	.0454	.0452	.0450	.0448	.0445	.0443
212.00	.0441	.0439	.0437	.0435	.0433	.0430	.0428	.0426	.0424	.0422	.0420	.0418
216.00	.0416	.0414	.0412	.0410	.0408	.0406	.0404	.0402	.0400	.0398	.0396	.0394
220.00	.0392	.0390	.0388	.0386	.0384	.0383	.0381	.0379	.0377	.0375	.0373	.0371
224.00	.0370	.0368	.0366	.0364	.0362	.0361	.0359	.0357	.0355	.0354	.0352	.0350
228.00	.0348	.0347	.0345	.0343	.0342	.0340	.0338	.0337	.0335	.0333	.0332	.0330
232.00	.0329	.0327	.0325	.0324	.0322	.0321	.0319	.0317	.0316	.0314	.0313	.0311
236.00	.0310	.0308	.0307	.0305	.0304	.0302	.0301	.0299	.0298	.0296	.0295	.0293
240.00	.0292	.0291	.0289	.0288	.0286	.0285	.0283	.0282	.0281	.0279	.0278	.0277
244.00	.0275	.0274	.0273	.0271	.0270	.0269	.0267	.0266	.0265	.0263	.0262	.0261
248.00	.0259	.0258	.0257	.0256	.0254	.0253	.0252	.0251	.0249	.0248	.0247	.0246
252.00	.0245	.0243	.0242	.0241	.0240	.0239	.0238	.0236	.0235	.0234	.0233	.0232
256.00	.0231	.0229	.0228	.0227	.0226	.0225	.0224	.0223	.0222	.0221	.0220	.0218
260.00	.0217	.0216	.0215	.0214	.0213	.0212	.0211	.0210	.0209	.0208	.0207	.0206
264.00	.0205	.0204	.0203	.0202	.0201	.0200	.0199	.0198	.0197	.0196	.0195	.0194
268.00	.0193	.0192	.0191	.0190	.0189	.0189	.0188	.0187	.0186	.0185	.0184	.0183
272.00	.0182	.0181	.0180	.0179	.0179	.0178	.0177	.0176	.0175	.0174	.0173	.0173
276.00	.0172	.0171	.0170	.0169	.0168	.0168	.0167	.0166	.0165	.0164	.0163	.0163
280.00	.0162	.0161	.0160	.0159	.0159	.0158	.0157	.0156	.0156	.0155	.0154	.0153
284.00	.0153	.0152	.0151	.0150	.0150	.0149	.0148	.0147	.0147	.0146	.0145	.0145
288.00	.0144	.0143	.0142	.0142	.0141	.0140	.0140	.0139	.0138	.0138	.0137	.0136
292.00	.0136	.0135	.0134	.0134	.0133	.0132	.0132	.0131	.0130	.0130	.0129	.0128
296.00	.0128	.0127	.0127	.0126	.0125	.0125	.0124	.0123	.0123	.0122	.0122	.0121
300.00	.0120	.0120	.0119	.0119	.0118	.0118	.0117	.0116	.0116	.0115	.0115	.0114
304.00	.0114	.0113	.0112	.0112	.0111	.0111	.0110	.0110	.0109	.0109	.0108	.0108
308.00	.0107	.0106	.0106	.0105	.0105	.0104	.0104	.0103	.0103	.0102	.0102	.0101
312.00	.0101	.0100	.0100	.0099	.0099	.0098	.0098	.0097	.0097	.0096	.0096	.0096

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HALF-LIFE 10.40 YEARS CALCULATION INTERVAL 1.0 MONTHS

YEARS	MONTHS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9944	.9889	.9834	.9780	.9726	.9672	.9618	.9565	.9512	.9459	.9407
1.00	.9355	.9303	.9251	.9200	.9149	.9099	.9048	.8998	.8948	.8899	.8849	.8800
2.00	.8752	.8703	.8655	.8607	.8559	.8512	.8465	.8418	.8371	.8325	.8279	.8233
3.00	.8187	.8142	.8097	.8052	.8007	.7963	.7919	.7875	.7831	.7788	.7745	.7702
4.00	.7659	.7617	.7575	.7533	.7491	.7450	.7408	.7367	.7326	.7286	.7245	.7205
5.00	.7165	.7126	.7086	.7047	.7008	.6969	.6931	.6892	.6854	.6816	.6778	.6741
6.00	.6703	.6666	.6629	.6593	.6556	.6520	.6484	.6448	.6412	.6377	.6341	.6306
7.00	.6271	.6236	.6202	.6168	.6133	.6099	.6066	.6032	.5999	.5965	.5932	.5899
8.00	.5867	.5834	.5802	.5770	.5738	.5706	.5675	.5643	.5612	.5581	.5550	.5519
9.00	.5489	.5458	.5428	.5398	.5368	.5338	.5309	.5279	.5250	.5221	.5192	.5163
10.00	.5135	.5106	.5078	.5050	.5022	.4994	.4966	.4939	.4911	.4884	.4857	.4830
11.00	.4804	.4777	.4750	.4724	.4698	.4672	.4646	.4620	.4595	.4569	.4544	.4519
12.00	.4494	.4469	.4444	.4419	.4395	.4371	.4346	.4322	.4298	.4275	.4251	.4227
13.00	.4204	.4181	.4158	.4135	.4112	.4089	.4066	.4044	.4021	.3999	.3977	.3955
14.00	.3933	.3911	.3889	.3868	.3846	.3825	.3804	.3783	.3762	.3741	.3720	.3700
15.00	.3679	.3659	.3639	.3618	.3598	.3579	.3559	.3539	.3519	.3500	.3480	.3461
16.00	.3442	.3423	.3404	.3385	.3366	.3348	.3329	.3311	.3292	.3274	.3256	.3238
17.00	.3220	.3202	.3184	.3167	.3149	.3132	.3115	.3097	.3080	.3063	.3046	.3029
18.00	.3012	.2996	.2979	.2963	.2946	.2930	.2914	.2898	.2881	.2866	.2850	.2834
19.00	.2818	.2803	.2787	.2772	.2756	.2741	.2726	.2711	.2696	.2681	.2666	.2651
20.00	.2636	.2622	.2607	.2593	.2578	.2564	.2550	.2536	.2522	.2508	.2494	.2480
21.00	.2466	.2453	.2439	.2426	.2412	.2399	.2386	.2372	.2359	.2346	.2333	.2320
22.00	.2307	.2295	.2282	.2269	.2257	.2244	.2232	.2219	.2207	.2195	.2183	.2171
23.00	.2159	.2147	.2135	.2123	.2111	.2099	.2088	.2076	.2065	.2053	.2042	.2031
24.00	.2019	.2008	.1997	.1986	.1975	.1964	.1953	.1942	.1932	.1921	.1910	.1900
25.00	.1889	.1879	.1868	.1858	.1848	.1837	.1827	.1817	.1807	.1797	.1787	.1777
26.00	.1767	.1757	.1748	.1738	.1728	.1719	.1709	.1700	.1690	.1681	.1672	.1663
27.00	.1653	.1644	.1635	.1626	.1617	.1608	.1599	.1590	.1581	.1573	.1564	.1555
28.00	.1547	.1538	.1530	.1521	.1513	.1504	.1496	.1488	.1479	.1471	.1463	.1455
29.00	.1447	.1439	.1431	.1423	.1415	.1407	.1399	.1392	.1384	.1376	.1369	.1361
30.00	.1354	.1346	.1339	.1331	.1324	.1317	.1309	.1302	.1295	.1288	.1280	.1273
31.00	.1266	.1259	.1252	.1245	.1238	.1232	.1225	.1218	.1211	.1205	.1198	.1191
32.00	.1185	.1178	.1172	.1165	.1159	.1152	.1146	.1139	.1133	.1127	.1121	.1114
33.00	.1108	.1102	.1096	.1090	.1084	.1078	.1072	.1066	.1060	.1054	.1048	.1042
34.00	.1037	.1031	.1025	.1020	.1014	.1008	.1003	.0997	.0992	.0986	.0981	.0975

LA - 140

HALF-LIFE 40.20 HOURS CALCULATION INTERVAL .5 HOURS

HOURS	HOURS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
0.0	1.0000	.9914	.9829	.9744	.9661	.9578	.9495	.9414	.9333	.9253
5.0	.9173	.9095	.9017	.8939	.8863	.8786	.8711	.8636	.8562	.8489
10.0	.8416	.8343	.8272	.8201	.8130	.8061	.7991	.7923	.7855	.7787
15.0	.7721	.7654	.7589	.7523	.7459	.7395	.7331	.7268	.7206	.7144
20.0	.7083	.7022	.6962	.6902	.6843	.6784	.6726	.6668	.6611	.6554
25.0	.6498	.6442	.6387	.6332	.6277	.6224	.6170	.6117	.6065	.6013
30.0	.5961	.5910	.5859	.5809	.5759	.5709	.5660	.5612	.5564	.5516
35.0	.5469	.5422	.5375	.5329	.5283	.5238	.5193	.5148	.5104	.5060
40.0	.5017	.4974	.4931	.4889	.4847	.4805	.4764	.4723	.4682	.4642
45.0	.4602	.4563	.4524	.4485	.4446	.4408	.4370	.4333	.4296	.4259
50.0	.4222	.4186	.4150	.4114	.4079	.4044	.4009	.3975	.3941	.3907
55.0	.3873	.3840	.3807	.3774	.3742	.3710	.3678	.3646	.3615	.3584
60.0	.3553	.3523	.3493	.3463	.3433	.3403	.3374	.3345	.3317	.3288
65.0	.3260	.3232	.3204	.3177	.3149	.3122	.3095	.3069	.3043	.3016
70.0	.2991	.2965	.2939	.2914	.2889	.2864	.2840	.2815	.2791	.2767
75.0	.2743	.2720	.2697	.2673	.2650	.2628	.2605	.2583	.2561	.2539
80.0	.2517	.2495	.2474	.2453	.2431	.2411	.2390	.2369	.2349	.2329
85.0	.2309	.2289	.2269	.2250	.2231	.2211	.2192	.2174	.2155	.2136
90.0	.2118	.2100	.2082	.2064	.2046	.2029	.2011	.1994	.1977	.1960
95.0	.1943	.1926	.1910	.1893	.1877	.1861	.1845	.1829	.1814	.1798
100.0	.1783	.1767	.1752	.1737	.1722	.1707	.1693	.1678	.1664	.1649
105.0	.1635	.1621	.1607	.1594	.1580	.1566	.1553	.1539	.1526	.1513
110.0	.1500	.1487	.1475	.1462	.1449	.1437	.1425	.1412	.1400	.1388
115.0	.1376	.1364	.1353	.1341	.1330	.1318	.1307	.1296	.1284	.1273
120.0	.1262	.1252	.1241	.1230	.1220	.1209	.1199	.1189	.1178	.1168
125.0	.1159	.1148	.1138	.1129	.1119	.1109	.1100	.1090	.1081	.1072
130.0	.1062	.1053	.1044	.1035	.1026	.1018	.1009	.1000	.0992	.0983

PR - 209

HALF-LIFE 3.30 HOURS CALCULATION INTERVAL 2.0 MINUTES

HOURS	MINUTES 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
0.00	1.0000	.9930	.9860	.9792	.9723	.9655	.9588	.9521	.9455	.9389	.9323	.9258
.40	.9194	.9130	.9066	.9003	.8940	.8877	.8815	.8754	.8693	.8632	.8572	.8512
.80	.8453	.8394	.8335	.8277	.8219	.8162	.8105	.8048	.7992	.7937	.7881	.7826
1.20	.7772	.7717	.7663	.7610	.7557	.7504	.7452	.7400	.7348	.7297	.7246	.7195
1.60	.7145	.7095	.7046	.6997	.6948	.6899	.6851	.6803	.6756	.6709	.6662	.6616
2.00	.6569	.6524	.6478	.6433	.6388	.6343	.6299	.6255	.6212	.6168	.6125	.6082
2.40	.6040	.5998	.5956	.5914	.5873	.5832	.5791	.5751	.5711	.5671	.5631	.5592
2.80	.5553	.5514	.5476	.5438	.5400	.5362	.5325	.5288	.5251	.5214	.5178	.5142
3.20	.5106	.5070	.5035	.5000	.4965	.4930	.4896	.4861	.4827	.4794	.4760	.4727
3.60	.4694	.4661	.4629	.4597	.4565	.4533	.4501	.4470	.4438	.4407	.4377	.4346
4.00	.4316	.4286	.4256	.4226	.4197	.4167	.4138	.4109	.4081	.4052	.4024	.3996
4.40	.3968	.3940	.3913	.3886	.3858	.3831	.3805	.3778	.3752	.3726	.3700	.3674
4.80	.3648	.3623	.3597	.3572	.3547	.3523	.3498	.3474	.3449	.3425	.3401	.3378
5.20	.3354	.3331	.3308	.3284	.3262	.3239	.3216	.3194	.3171	.3149	.3127	.3106
5.60	.3084	.3062	.3041	.3020	.2999	.2978	.2957	.2936	.2916	.2895	.2875	.2855
6.00	.2835	.2815	.2796	.2776	.2757	.2738	.2719	.2700	.2681	.2662	.2644	.2625
6.40	.2607	.2589	.2571	.2553	.2535	.2517	.2500	.2482	.2465	.2448	.2430	.2413
6.80	.2397	.2380	.2363	.2347	.2330	.2314	.2298	.2282	.2266	.2250	.2235	.2219
7.20	.2203	.2188	.2173	.2158	.2143	.2128	.2113	.2098	.2083	.2069	.2054	.2040
7.60	.2026	.2012	.1998	.1984	.1970	.1956	.1943	.1929	.1915	.1902	.1889	.1876
8.00	.1863	.1850	.1837	.1824	.1811	.1798	.1786	.1773	.1761	.1749	.1737	.1724
8.40	.1712	.1700	.1689	.1677	.1665	.1654	.1642	.1631	.1619	.1608	.1597	.1585
8.80	.1574	.1563	.1553	.1542	.1531	.1520	.1510	.1499	.1489	.1478	.1468	.1458
9.20	.1447	.1437	.1427	.1417	.1408	.1398	.1388	.1378	.1369	.1359	.1350	.1340
9.60	.1331	.1322	.1312	.1303	.1294	.1285	.1276	.1267	.1258	.1250	.1241	.1232
10.00	.1224	.1215	.1207	.1198	.1190	.1181	.1173	.1165	.1157	.1149	.1141	.1133
10.40	.1125	.1117	.1109	.1101	.1094	.1086	.1079	.1071	.1064	.1056	.1049	.1041
10.80	.1034	.1027	.1020	.1013	.1006	.0999	.0992	.0985	.0978	.0971	.0964	.0957

PR - 210

HALF-LIFE 21.00 YEARS CALCULATION INTERVAL 1.0 MONTHS

YEARS	MONTHS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9972	.9945	.9917	.9890	.9863	.9836	.9809	.9782	.9755	.9728	.9701
1.00	.9675	.9648	.9622	.9595	.9569	.9543	.9516	.9490	.9464	.9438	.9412	.9386
2.00	.9361	.9335	.9309	.9284	.9258	.9233	.9207	.9182	.9157	.9132	.9107	.9082
3.00	.9057	.9032	.9007	.8982	.8958	.8933	.8908	.8884	.8860	.8835	.8811	.8787
4.00	.8763	.8739	.8715	.8691	.8667	.8643	.8619	.8596	.8572	.8548	.8525	.8501
5.00	.8478	.8455	.8432	.8408	.8385	.8362	.8339	.8316	.8294	.8271	.8248	.8225
6.00	.8203	.8180	.8158	.8135	.8113	.8091	.8069	.8046	.8024	.8002	.7980	.7958
7.00	.7937	.7915	.7893	.7871	.7850	.7828	.7807	.7785	.7764	.7742	.7721	.7700
8.00	.7679	.7658	.7637	.7616	.7595	.7574	.7553	.7532	.7512	.7491	.7470	.7450
9.00	.7429	.7409	.7389	.7368	.7348	.7328	.7308	.7288	.7268	.7248	.7228	.7208
10.00	.7188	.7168	.7149	.7129	.7110	.7090	.7071	.7051	.7032	.7012	.6993	.6974
11.00	.6955	.6936	.6917	.6898	.6879	.6860	.6841	.6822	.6803	.6785	.6766	.6748
12.00	.6729	.6711	.6692	.6674	.6655	.6637	.6619	.6601	.6583	.6564	.6546	.6528
13.00	.6511	.6493	.6475	.6457	.6439	.6422	.6404	.6386	.6369	.6351	.6334	.6316
14.00	.6299	.6282	.6265	.6247	.6230	.6213	.6196	.6179	.6162	.6145	.6128	.6111
15.00	.6095	.6078	.6061	.6044	.6028	.6011	.5995	.5978	.5962	.5946	.5929	.5913
16.00	.5897	.5880	.5864	.5848	.5832	.5816	.5800	.5784	.5768	.5752	.5737	.5721
17.00	.5705	.5690	.5674	.5658	.5643	.5627	.5612	.5596	.5581	.5566	.5550	.5535
18.00	.5520	.5505	.5490	.5475	.5460	.5445	.5430	.5415	.5400	.5385	.5370	.5355
19.00	.5341	.5326	.5311	.5297	.5282	.5268	.5253	.5239	.5224	.5210	.5196	.5182
20.00	.5167	.5153	.5139	.5125	.5111	.5097	.5083	.5069	.5055	.5041	.5027	.5013
21.00	.5000	.4986	.4972	.4958	.4945	.4931	.4918	.4904	.4891	.4877	.4864	.4850
22.00	.4837	.4824	.4811	.4797	.4784	.4771	.4758	.4745	.4732	.4719	.4706	.4693
23.00	.4680	.4667	.4654	.4642	.4629	.4616	.4603	.4591	.4578	.4566	.4553	.4541
24.00	.4528	.4516	.4503	.4491	.4479	.4466	.4454	.4442	.4430	.4417	.4405	.4393
25.00	.4381	.4369	.4357	.4345	.4333	.4321	.4309	.4298	.4286	.4274	.4262	.4251
26.00	.4239	.4227	.4216	.4204	.4193	.4181	.4169	.4158	.4147	.4135	.4124	.4112
27.00	.4101	.4090	.4079	.4067	.4056	.4045	.4034	.4023	.4012	.4001	.3990	.3979
28.00	.3968	.3957	.3946	.3935	.3925	.3914	.3903	.3892	.3882	.3871	.3860	.3850
29.00	.3839	.3829	.3818	.3808	.3797	.3787	.3776	.3766	.3756	.3745	.3735	.3725
30.00	.3714	.3704	.3694	.3684	.3674	.3664	.3654	.3644	.3634	.3624	.3614	.3604
31.00	.3594	.3584	.3574	.3564	.3555	.3545	.3535	.3525	.3516	.3506	.3496	.3487
32.00	.3477	.3468	.3458	.3449	.3439	.3430	.3420	.3411	.3401	.3392	.3383	.3374
33.00	.3364	.3355	.3346	.3337	.3327	.3318	.3309	.3300	.3291	.3282	.3273	.3264
34.00	.3255	.3246	.3237	.3228	.3219	.3211	.3202	.3193	.3184	.3175	.3167	.3158
35.00	.3149	.3141	.3132	.3123	.3115	.3106	.3098	.3089	.3081	.3072	.3064	.3055
36.00	.3047	.3039	.3030	.3022	.3014	.3005	.2997	.2989	.2981	.2973	.2964	.2956
37.00	.2948	.2940	.2932	.2924	.2916	.2908	.2900	.2892	.2884	.2876	.2868	.2860
38.00	.2852	.2845	.2837	.2829	.2821	.2813	.2806	.2798	.2790	.2783	.2775	.2767
39.00	.2760	.2752	.2745	.2737	.2730	.2722	.2715	.2707	.2700	.2692	.2685	.2677

PB - 210

HALF-LIFE 21.00 YEARS CALCULATION INTERVAL 1.0 MONTHS

YEARS	MONTHS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
40.00	.2670	.2663	.2655	.2648	.2641	.2634	.2626	.2619	.2612	.2605	.2598	.2591
41.00	.2583	.2576	.2569	.2562	.2555	.2548	.2541	.2534	.2527	.2520	.2513	.2506
42.00	.2500	.2493	.2486	.2479	.2472	.2465	.2459	.2452	.2445	.2438	.2432	.2425
43.00	.2418	.2412	.2405	.2398	.2392	.2385	.2379	.2372	.2366	.2359	.2353	.2346
44.00	.2340	.2333	.2327	.2321	.2314	.2308	.2301	.2295	.2289	.2283	.2276	.2270
45.00	.2264	.2258	.2251	.2245	.2239	.2233	.2227	.2221	.2215	.2208	.2202	.2196
46.00	.2190	.2184	.2178	.2172	.2166	.2160	.2154	.2149	.2143	.2137	.2131	.2125
47.00	.2119	.2113	.2108	.2102	.2096	.2090	.2084	.2079	.2073	.2067	.2062	.2056
48.00	.2050	.2045	.2039	.2033	.2028	.2022	.2017	.2011	.2006	.2000	.1995	.1989
49.00	.1984	.1978	.1973	.1967	.1962	.1957	.1951	.1946	.1941	.1935	.1930	.1925
50.00	.1919	.1914	.1909	.1904	.1898	.1893	.1888	.1883	.1878	.1872	.1867	.1862
51.00	.1857	.1852	.1847	.1842	.1837	.1832	.1827	.1822	.1817	.1812	.1807	.1802
52.00	.1797	.1792	.1787	.1782	.1777	.1772	.1767	.1762	.1758	.1753	.1748	.1743
53.00	.1738	.1734	.1729	.1724	.1719	.1715	.1710	.1705	.1700	.1696	.1691	.1687
54.00	.1682	.1677	.1673	.1668	.1663	.1659	.1654	.1650	.1645	.1641	.1636	.1632
55.00	.1627	.1623	.1618	.1614	.1609	.1605	.1601	.1596	.1592	.1587	.1583	.1579
56.00	.1574	.1570	.1566	.1561	.1557	.1553	.1549	.1544	.1540	.1536	.1532	.1527
57.00	.1523	.1519	.1515	.1511	.1507	.1502	.1498	.1494	.1490	.1486	.1482	.1478
58.00	.1474	.1470	.1466	.1462	.1458	.1454	.1450	.1446	.1442	.1438	.1434	.1430
59.00	.1426	.1422	.1418	.1414	.1410	.1406	.1403	.1399	.1395	.1391	.1387	.1383
60.00	.1380	.1376	.1372	.1368	.1365	.1361	.1357	.1353	.1350	.1346	.1342	.1338
61.00	.1335	.1331	.1327	.1324	.1320	.1317	.1313	.1309	.1306	.1302	.1299	.1295
62.00	.1291	.1288	.1284	.1281	.1277	.1274	.1270	.1267	.1263	.1260	.1256	.1253
63.00	.1250	.1246	.1243	.1239	.1236	.1232	.1229	.1226	.1222	.1219	.1216	.1212
64.00	.1209	.1206	.1202	.1199	.1196	.1192	.1189	.1186	.1183	.1179	.1176	.1173
65.00	.1170	.1166	.1163	.1160	.1157	.1154	.1151	.1147	.1144	.1141	.1138	.1135
66.00	.1132	.1129	.1125	.1122	.1119	.1116	.1113	.1110	.1107	.1104	.1101	.1098
67.00	.1095	.1092	.1089	.1086	.1083	.1080	.1077	.1074	.1071	.1068	.1065	.1062
68.00	.1059	.1056	.1054	.1051	.1048	.1045	.1042	.1039	.1036	.1033	.1031	.1028
69.00	.1025	.1022	.1019	.1017	.1014	.1011	.1008	.1005	.1003	.1000	.0997	.0994

PR - 211

HALF-LIFE 36.10 MINUTES CALCULATION INTERVAL .5 MINUTES

MINUTES	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
0.0	1.0000	.9904	.9809	.9716	.9623	.9531	.9440	.9350	.9260	.9172
5.0	.9084	.8997	.8911	.8826	.8742	.8658	.8576	.8494	.8413	.8332
10.0	.8253	.8174	.8096	.8018	.7942	.7866	.7791	.7716	.7642	.7569
15.0	.7497	.7425	.7354	.7284	.7215	.7146	.7077	.7010	.6943	.6876
20.0	.6811	.6746	.6681	.6617	.6554	.6491	.6429	.6368	.6307	.6247
25.0	.6187	.6128	.6070	.6012	.5954	.5897	.5841	.5785	.5730	.5675
30.0	.5621	.5567	.5514	.5461	.5409	.5357	.5306	.5255	.5205	.5155
35.0	.5106	.5057	.5009	.4961	.4914	.4867	.4820	.4774	.4729	.4684
40.0	.4639	.4594	.4551	.4507	.4464	.4421	.4379	.4337	.4296	.4255
45.0	.4214	.4174	.4134	.4094	.4055	.4017	.3978	.3940	.3903	.3865
50.0	.3828	.3792	.3755	.3720	.3684	.3649	.3614	.3579	.3545	.3511
55.0	.3478	.3445	.3412	.3379	.3347	.3315	.3283	.3252	.3221	.3190
60.0	.3159	.3129	.3099	.3070	.3040	.3011	.2983	.2954	.2926	.2898
65.0	.2870	.2843	.2816	.2789	.2762	.2736	.2709	.2684	.2658	.2633
70.0	.2607	.2582	.2558	.2533	.2509	.2485	.2461	.2438	.2415	.2391
75.0	.2369	.2346	.2324	.2301	.2279	.2258	.2236	.2215	.2193	.2173
80.0	.2152	.2131	.2111	.2091	.2071	.2051	.2031	.2012	.1993	.1974
85.0	.1955	.1936	.1918	.1899	.1881	.1863	.1845	.1828	.1810	.1793
90.0	.1776	.1759	.1742	.1725	.1709	.1693	.1676	.1660	.1644	.1629
95.0	.1613	.1598	.1582	.1567	.1552	.1538	.1523	.1508	.1494	.1480
100.0	.1465	.1451	.1438	.1424	.1410	.1397	.1383	.1370	.1357	.1344
105.0	.1331	.1319	.1306	.1293	.1281	.1269	.1257	.1245	.1233	.1221
110.0	.1209	.1198	.1186	.1175	.1164	.1153	.1142	.1131	.1120	.1109
115.0	.1099	.1088	.1078	.1067	.1057	.1047	.1037	.1027	.1017	.1008
120.0	.0998	.0988	.0979	.0970	.0960	.0951	.0942	.0933	.0924	.0915

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PB - 212

HALF-LIFE 10.64 HOURS CALCULATION INTERVAL 5.0 MINUTES

HOURS	MINUTES 0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0
0.00	1.0000	.9945	.9892	.9838	.9785	.9732	.9679	.9627	.9574	.9523	.9471	.9420
1.00	.9369	.9318	.9268	.9217	.9168	.9118	.9069	.9019	.8971	.8922	.8874	.8826
2.00	.8778	.8730	.8683	.8636	.8589	.8543	.8497	.8451	.8405	.8359	.8314	.8269
3.00	.8224	.8180	.8135	.8091	.8048	.8004	.7961	.7918	.7875	.7832	.7790	.7747
4.00	.7706	.7664	.7622	.7581	.7540	.7499	.7459	.7418	.7378	.7338	.7298	.7259
5.00	.7220	.7180	.7142	.7103	.7064	.7026	.6988	.6950	.6913	.6875	.6838	.6801
6.00	.6764	.6728	.6691	.6655	.6619	.6583	.6547	.6512	.6477	.6442	.6407	.6372
7.00	.6338	.6303	.6269	.6235	.6201	.6168	.6134	.6101	.6068	.6035	.6003	.5970
8.00	.5938	.5906	.5874	.5842	.5810	.5779	.5747	.5716	.5685	.5655	.5624	.5594
9.00	.5563	.5533	.5503	.5473	.5444	.5414	.5385	.5356	.5327	.5298	.5269	.5241
10.00	.5212	.5184	.5156	.5128	.5100	.5073	.5045	.5018	.4991	.4964	.4937	.4910
11.00	.4884	.4857	.4831	.4805	.4779	.4753	.4727	.4701	.4676	.4651	.4626	.4600
12.00	.4576	.4551	.4526	.4502	.4477	.4453	.4429	.4405	.4381	.4357	.4334	.4310
13.00	.4287	.4264	.4241	.4218	.4195	.4172	.4150	.4127	.4105	.4083	.4060	.4038
14.00	.4017	.3995	.3973	.3952	.3930	.3909	.3888	.3867	.3846	.3825	.3804	.3784
15.00	.3763	.3743	.3723	.3702	.3682	.3662	.3643	.3623	.3603	.3584	.3564	.3545
16.00	.3526	.3507	.3488	.3469	.3450	.3431	.3413	.3394	.3376	.3358	.3340	.3321
17.00	.3303	.3286	.3268	.3250	.3232	.3215	.3198	.3180	.3163	.3146	.3129	.3112
18.00	.3095	.3078	.3062	.3045	.3029	.3012	.2996	.2980	.2964	.2947	.2931	.2916
19.00	.2900	.2884	.2869	.2853	.2838	.2822	.2807	.2792	.2777	.2762	.2747	.2732
20.00	.2717	.2702	.2688	.2673	.2659	.2644	.2630	.2616	.2601	.2587	.2573	.2559
21.00	.2546	.2532	.2518	.2504	.2491	.2477	.2464	.2451	.2437	.2424	.2411	.2398
22.00	.2385	.2372	.2359	.2346	.2334	.2321	.2309	.2296	.2284	.2271	.2259	.2247
23.00	.2235	.2222	.2210	.2198	.2186	.2175	.2163	.2151	.2140	.2128	.2116	.2105
24.00	.2094	.2082	.2071	.2060	.2049	.2037	.2026	.2015	.2005	.1994	.1983	.1972
25.00	.1961	.1951	.1940	.1930	.1919	.1909	.1899	.1888	.1878	.1868	.1858	.1848
26.00	.1838	.1828	.1818	.1808	.1798	.1789	.1779	.1769	.1760	.1750	.1741	.1731
27.00	.1722	.1712	.1703	.1694	.1685	.1676	.1667	.1658	.1649	.1640	.1631	.1622
28.00	.1613	.1604	.1596	.1587	.1579	.1570	.1561	.1553	.1545	.1536	.1528	.1520
29.00	.1511	.1503	.1495	.1487	.1479	.1471	.1463	.1455	.1447	.1439	.1432	.1424
30.00	.1416	.1408	.1401	.1393	.1386	.1378	.1371	.1363	.1356	.1349	.1341	.1334
31.00	.1327	.1320	.1313	.1305	.1298	.1291	.1284	.1277	.1270	.1263	.1257	.1250
32.00	.1243	.1236	.1230	.1223	.1216	.1210	.1203	.1197	.1190	.1184	.1177	.1171
33.00	.1165	.1158	.1152	.1146	.1140	.1133	.1127	.1121	.1115	.1109	.1103	.1097
34.00	.1091	.1085	.1079	.1073	.1068	.1062	.1056	.1050	.1045	.1039	.1033	.1028
35.00	.1022	.1017	.1011	.1006	.1000	.0995	.0989	.0984	.0979	.0973	.0968	.0963

PB - 214

HALF-LIFE 26.80 MINUTES CALCULATION INTERVAL 15.0 SECONDS

MINUTES	SECONDS 0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0	150.0	165.0
0.00	1.0000	.9935	.9871	.9807	.9744	.9681	.9619	.9557	.9495	.9434	.9373	.9313
3.00	.9253	.9193	.9134	.9075	.9017	.8959	.8901	.8843	.8786	.8730	.8674	.8618
6.00	.8562	.8507	.8452	.8398	.8343	.8290	.8236	.8183	.8130	.8078	.8026	.7974
9.00	.7923	.7872	.7821	.7771	.7721	.7671	.7621	.7572	.7523	.7475	.7427	.7379
12.00	.7331	.7284	.7237	.7190	.7144	.7098	.7052	.7007	.6962	.6917	.6872	.6828
15.00	.6784	.6740	.6697	.6654	.6611	.6568	.6526	.6484	.6442	.6400	.6359	.6318
18.00	.6277	.6237	.6197	.6157	.6117	.6078	.6039	.6000	.5961	.5923	.5884	.5846
21.00	.5809	.5771	.5734	.5697	.5660	.5624	.5588	.5552	.5516	.5480	.5445	.5410
24.00	.5375	.5340	.5306	.5272	.5238	.5204	.5170	.5137	.5104	.5071	.5038	.5006
27.00	.4974	.4942	.4910	.4878	.4847	.4815	.4784	.4754	.4723	.4692	.4662	.4632
30.00	.4602	.4573	.4543	.4514	.4485	.4456	.4427	.4399	.4370	.4342	.4314	.4286
33.00	.4259	.4231	.4204	.4177	.4150	.4123	.4097	.4070	.4044	.4018	.3992	.3966
36.00	.3941	.3915	.3890	.3865	.3840	.3815	.3791	.3766	.3742	.3718	.3694	.3670
39.00	.3646	.3623	.3600	.3576	.3553	.3530	.3508	.3485	.3463	.3440	.3418	.3396
42.00	.3374	.3352	.3331	.3309	.3288	.3267	.3246	.3225	.3204	.3183	.3163	.3143
45.00	.3122	.3102	.3082	.3062	.3043	.3023	.3003	.2984	.2965	.2946	.2927	.2908
48.00	.2889	.2871	.2852	.2834	.2815	.2797	.2779	.2761	.2743	.2726	.2708	.2691
51.00	.2673	.2656	.2639	.2622	.2605	.2588	.2572	.2555	.2539	.2522	.2506	.2490
54.00	.2474	.2458	.2442	.2426	.2411	.2395	.2380	.2364	.2349	.2334	.2319	.2304
57.00	.2289	.2274	.2260	.2245	.2231	.2216	.2202	.2188	.2174	.2160	.2146	.2132
60.00	.2118	.2104	.2091	.2077	.2064	.2051	.2037	.2024	.2011	.1998	.1985	.1973
63.00	.1960	.1947	.1935	.1922	.1910	.1898	.1885	.1873	.1861	.1849	.1837	.1825
66.00	.1814	.1802	.1790	.1779	.1767	.1756	.1745	.1733	.1722	.1711	.1700	.1689
69.00	.1678	.1667	.1657	.1646	.1635	.1625	.1614	.1604	.1594	.1583	.1573	.1563
72.00	.1553	.1543	.1533	.1523	.1513	.1503	.1494	.1484	.1475	.1465	.1456	.1446
75.00	.1437	.1428	.1418	.1409	.1400	.1391	.1382	.1373	.1364	.1356	.1347	.1338
78.00	.1330	.1321	.1312	.1304	.1296	.1287	.1279	.1271	.1262	.1254	.1246	.1238
81.00	.1230	.1222	.1214	.1207	.1199	.1191	.1183	.1176	.1168	.1161	.1153	.1146
84.00	.1138	.1131	.1124	.1116	.1109	.1102	.1095	.1088	.1081	.1074	.1067	.1060
87.00	.1053	.1047	.1040	.1033	.1026	.1020	.1013	.1007	.1000	.0994	.0987	.0981

LU - 177

HALF-LIFE 6.80 DAYS CALCULATION INTERVAL 2.0 HOURS

DAYS	HOURS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
0.00	1.0000	.9915	.9831	.9748	.9665	.9584	.9503	.9422	.9343	.9263	.9185	.9107
1.00	.9030	.8954	.8878	.8803	.8729	.8655	.8582	.8509	.8437	.8366	.8295	.8225
2.00	.8155	.8086	.8018	.7950	.7883	.7816	.7750	.7684	.7619	.7555	.7491	.7428
3.00	.7365	.7303	.7241	.7180	.7119	.7059	.6999	.6940	.6881	.6823	.6765	.6708
4.00	.6651	.6595	.6539	.6484	.6429	.6374	.6321	.6267	.6214	.6162	.6109	.6058
5.00	.6006	.5956	.5905	.5855	.5806	.5757	.5708	.5660	.5612	.5564	.5517	.5471
6.00	.5424	.5378	.5333	.5288	.5243	.5199	.5155	.5111	.5068	.5025	.4983	.4940
7.00	.4899	.4857	.4816	.4775	.4735	.4695	.4655	.4616	.4577	.4538	.4500	.4462
8.00	.4424	.4386	.4349	.4313	.4276	.4240	.4204	.4168	.4133	.4098	.4064	.4029
9.00	.3995	.3961	.3928	.3895	.3862	.3829	.3797	.3764	.3733	.3701	.3670	.3639
10.00	.3608	.3577	.3547	.3517	.3487	.3458	.3429	.3400	.3371	.3342	.3314	.3286
11.00	.3258	.3231	.3203	.3176	.3149	.3123	.3096	.3070	.3044	.3018	.2993	.2967
12.00	.2942	.2917	.2893	.2868	.2844	.2820	.2796	.2772	.2749	.2726	.2703	.2680
13.00	.2657	.2635	.2612	.2590	.2568	.2547	.2525	.2504	.2483	.2462	.2441	.2420
14.00	.2400	.2379	.2359	.2339	.2319	.2300	.2280	.2261	.2242	.2223	.2204	.2186
15.00	.2167	.2149	.2131	.2112	.2095	.2077	.2059	.2042	.2025	.2007	.1991	.1974
16.00	.1957	.1940	.1924	.1908	.1892	.1876	.1860	.1844	.1828	.1813	.1798	.1782
17.00	.1767	.1752	.1737	.1723	.1708	.1694	.1679	.1665	.1651	.1637	.1623	.1610
18.00	.1596	.1582	.1569	.1556	.1543	.1530	.1517	.1504	.1491	.1478	.1466	.1454
19.00	.1441	.1429	.1417	.1405	.1393	.1381	.1370	.1358	.1347	.1335	.1324	.1313
20.00	.1302	.1291	.1280	.1269	.1258	.1247	.1237	.1226	.1216	.1206	.1195	.1185
21.00	.1175	.1165	.1156	.1146	.1136	.1126	.1117	.1107	.1098	.1089	.1080	.1070
22.00	.1061	.1052	.1044	.1035	.1026	.1017	.1009	.1000	.0992	.0983	.0975	.0967

MN - 54

HALF-LIFE 290.00 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	1.0000	.9976	.9952	.9928	.9904	.9881	.9857	.9834	.9810	.9787
10.0	.9763	.9740	.9717	.9694	.9670	.9647	.9624	.9601	.9578	.9556
20.0	.9533	.9510	.9487	.9465	.9442	.9419	.9397	.9375	.9352	.9330
30.0	.9308	.9285	.9263	.9241	.9219	.9197	.9175	.9153	.9131	.9109
40.0	.9088	.9066	.9044	.9023	.9001	.8980	.8958	.8937	.8916	.8894
50.0	.8873	.8852	.8831	.8810	.8789	.8768	.8747	.8726	.8705	.8684
60.0	.8663	.8643	.8622	.8602	.8581	.8561	.8540	.8520	.8499	.8479
70.0	.8459	.8439	.8419	.8398	.8378	.8358	.8338	.8319	.8299	.8279
80.0	.8259	.8239	.8220	.8200	.8180	.8161	.8141	.8122	.8103	.8083
90.0	.8064	.8045	.8026	.8006	.7987	.7968	.7949	.7930	.7911	.7892
100.0	.7874	.7855	.7836	.7817	.7799	.7780	.7761	.7743	.7724	.7706
110.0	.7688	.7669	.7651	.7633	.7614	.7596	.7578	.7560	.7542	.7524
120.0	.7506	.7488	.7470	.7452	.7435	.7417	.7399	.7381	.7364	.7346
130.0	.7329	.7311	.7294	.7276	.7259	.7242	.7224	.7207	.7190	.7173
140.0	.7156	.7138	.7121	.7104	.7087	.7071	.7054	.7037	.7020	.7003
150.0	.6987	.6970	.6953	.6937	.6920	.6904	.6887	.6871	.6854	.6838
160.0	.6822	.6805	.6789	.6773	.6757	.6740	.6724	.6708	.6692	.6676
170.0	.6660	.6645	.6629	.6613	.6597	.6581	.6566	.6550	.6534	.6519
180.0	.6503	.6488	.6472	.6457	.6441	.6426	.6410	.6395	.6380	.6365
190.0	.6349	.6334	.6319	.6304	.6289	.6274	.6259	.6244	.6229	.6214
200.0	.6200	.6185	.6170	.6155	.6141	.6126	.6111	.6097	.6082	.6068
210.0	.6053	.6039	.6024	.6010	.5995	.5981	.5967	.5953	.5938	.5924
220.0	.5910	.5896	.5882	.5868	.5854	.5840	.5826	.5812	.5798	.5784
230.0	.5771	.5757	.5743	.5729	.5716	.5702	.5688	.5675	.5661	.5648
240.0	.5634	.5621	.5607	.5594	.5581	.5567	.5554	.5541	.5527	.5514
250.0	.5501	.5488	.5475	.5462	.5449	.5436	.5423	.5410	.5397	.5384
260.0	.5371	.5358	.5346	.5333	.5320	.5307	.5295	.5282	.5269	.5257
270.0	.5244	.5232	.5219	.5207	.5194	.5182	.5170	.5157	.5145	.5133
280.0	.5120	.5108	.5096	.5084	.5072	.5060	.5048	.5035	.5023	.5011
290.0	.5000	.4988	.4976	.4964	.4952	.4940	.4928	.4917	.4905	.4893
300.0	.4881	.4870	.4858	.4847	.4835	.4823	.4812	.4800	.4789	.4778
310.0	.4766	.4755	.4743	.4732	.4721	.4709	.4698	.4687	.4676	.4665
320.0	.4654	.4642	.4631	.4620	.4609	.4598	.4587	.4576	.4565	.4554
330.0	.4544	.4533	.4522	.4511	.4500	.4490	.4479	.4468	.4458	.4447
340.0	.4436	.4426	.4415	.4405	.4394	.4384	.4373	.4363	.4352	.4342
350.0	.4331	.4321	.4311	.4301	.4290	.4280	.4270	.4260	.4249	.4239
360.0	.4229	.4219	.4209	.4199	.4189	.4179	.4169	.4159	.4149	.4139
370.0	.4129	.4119	.4110	.4100	.4090	.4080	.4070	.4061	.4051	.4041
380.0	.4032	.4022	.4013	.4003	.3993	.3984	.3974	.3965	.3955	.3946
390.0	.3937	.3927	.3918	.3908	.3899	.3890	.3880	.3871	.3862	.3853

MN - 54

HALF-LIFE 290.00 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
400.0	.3844	.3834	.3825	.3816	.3807	.3798	.3789	.3780	.3771	.3762
410.0	.3753	.3744	.3735	.3726	.3717	.3708	.3699	.3690	.3682	.3673
420.0	.3664	.3655	.3647	.3638	.3629	.3621	.3612	.3603	.3595	.3586
430.0	.3578	.3569	.3560	.3552	.3543	.3535	.3527	.3518	.3510	.3501
440.0	.3493	.3485	.3476	.3468	.3460	.3452	.3443	.3435	.3427	.3419
450.0	.3411	.3402	.3394	.3386	.3378	.3370	.3362	.3354	.3346	.3338
460.0	.3330	.3322	.3314	.3306	.3298	.3290	.3283	.3275	.3267	.3259
470.0	.3251	.3244	.3236	.3228	.3220	.3213	.3205	.3197	.3190	.3182
480.0	.3174	.3167	.3159	.3152	.3144	.3137	.3129	.3122	.3114	.3107
490.0	.3100	.3092	.3085	.3077	.3070	.3063	.3055	.3048	.3041	.3034
500.0	.3026	.3019	.3012	.3005	.2997	.2990	.2983	.2976	.2969	.2962
510.0	.2955	.2948	.2941	.2934	.2927	.2920	.2913	.2906	.2899	.2892
520.0	.2885	.2878	.2871	.2864	.2858	.2851	.2844	.2837	.2830	.2824
530.0	.2817	.2810	.2803	.2797	.2790	.2783	.2777	.2770	.2763	.2757
540.0	.2750	.2744	.2737	.2731	.2724	.2718	.2711	.2705	.2698	.2692
550.0	.2685	.2679	.2673	.2666	.2660	.2653	.2647	.2641	.2634	.2628
560.0	.2622	.2616	.2609	.2603	.2597	.2591	.2585	.2578	.2572	.2566
570.0	.2560	.2554	.2548	.2542	.2536	.2530	.2524	.2517	.2511	.2505
580.0	.2500	.2494	.2488	.2482	.2476	.2470	.2464	.2458	.2452	.2446
590.0	.2440	.2435	.2429	.2423	.2417	.2411	.2406	.2400	.2394	.2389
600.0	.2383	.2377	.2371	.2366	.2360	.2354	.2349	.2343	.2338	.2332
610.0	.2327	.2321	.2315	.2310	.2304	.2299	.2293	.2288	.2282	.2277
620.0	.2272	.2266	.2261	.2255	.2250	.2245	.2239	.2234	.2229	.2223
630.0	.2218	.2213	.2207	.2202	.2197	.2192	.2186	.2181	.2176	.2171
640.0	.2165	.2160	.2155	.2150	.2145	.2140	.2135	.2130	.2124	.2119
650.0	.2114	.2109	.2104	.2099	.2094	.2089	.2084	.2079	.2074	.2069
660.0	.2064	.2059	.2055	.2050	.2045	.2040	.2035	.2030	.2025	.2020
670.0	.2016	.2011	.2006	.2001	.1996	.1992	.1987	.1982	.1977	.1973
680.0	.1968	.1963	.1959	.1954	.1949	.1945	.1940	.1935	.1931	.1926
690.0	.1922	.1917	.1912	.1908	.1903	.1899	.1894	.1890	.1885	.1881
700.0	.1876	.1872	.1867	.1863	.1858	.1854	.1849	.1845	.1841	.1836
710.0	.1832	.1827	.1823	.1819	.1814	.1810	.1806	.1801	.1797	.1793
720.0	.1789	.1784	.1780	.1776	.1771	.1767	.1763	.1759	.1755	.1750
730.0	.1746	.1742	.1738	.1734	.1730	.1726	.1721	.1717	.1713	.1709
740.0	.1705	.1701	.1697	.1693	.1689	.1685	.1681	.1677	.1673	.1669
750.0	.1665	.1661	.1657	.1653	.1649	.1645	.1641	.1637	.1633	.1629
760.0	.1625	.1622	.1618	.1614	.1610	.1606	.1602	.1598	.1595	.1591
770.0	.1587	.1583	.1579	.1576	.1572	.1568	.1564	.1561	.1557	.1553
780.0	.1550	.1546	.1542	.1538	.1535	.1531	.1527	.1524	.1520	.1517
790.0	.1513	.1509	.1506	.1502	.1498	.1495	.1491	.1488	.1484	.1481

MN - 54

HALF-LIFE 290.00 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
800.0	.1477	.1474	.1470	.1467	.1463	.1460	.1456	.1453	.1449	.1446
810.0	.1442	.1439	.1435	.1432	.1429	.1425	.1422	.1418	.1415	.1412
820.0	.1408	.1405	.1401	.1398	.1395	.1391	.1388	.1385	.1381	.1378
830.0	.1375	.1372	.1368	.1365	.1362	.1359	.1355	.1352	.1349	.1346
840.0	.1342	.1339	.1336	.1333	.1330	.1326	.1323	.1320	.1317	.1314
850.0	.1311	.1308	.1304	.1301	.1298	.1295	.1292	.1289	.1286	.1283
860.0	.1280	.1277	.1274	.1271	.1268	.1265	.1262	.1258	.1255	.1252
870.0	.1250	.1247	.1244	.1241	.1238	.1235	.1232	.1229	.1226	.1223
880.0	.1220	.1217	.1214	.1211	.1208	.1205	.1203	.1200	.1197	.1194
890.0	.1191	.1188	.1185	.1183	.1180	.1177	.1174	.1171	.1169	.1166
900.0	.1163	.1160	.1157	.1155	.1152	.1149	.1146	.1144	.1141	.1138
910.0	.1136	.1133	.1130	.1127	.1125	.1122	.1119	.1117	.1114	.1111
920.0	.1109	.1106	.1103	.1101	.1098	.1096	.1093	.1090	.1088	.1085
930.0	.1082	.1080	.1077	.1075	.1072	.1070	.1067	.1065	.1062	.1059
940.0	.1057	.1054	.1052	.1049	.1047	.1044	.1042	.1039	.1037	.1034
950.0	.1032	.1029	.1027	.1025	.1022	.1020	.1017	.1015	.1012	.1010
960.0	.1008	.1005	.1003	.1000	.0998	.0996	.0993	.0991	.0988	.0986

HG - 203

HALF-LIFE 47.00 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
0.00	1.0000	.9950	.9902	.9853	.9805	.9757	.9709	.9661	.9614	.9567	.9520	.9473
4.00	.9427	.9380	.9334	.9289	.9243	.9198	.9153	.9108	.9063	.9019	.8974	.8930
8.00	.8887	.8843	.8800	.8757	.8714	.8671	.8628	.8586	.8544	.8502	.8460	.8419
12.00	.8378	.8336	.8296	.8255	.8214	.8174	.8134	.8094	.8054	.8015	.7976	.7937
16.00	.7898	.7859	.7820	.7782	.7744	.7706	.7668	.7630	.7593	.7556	.7519	.7482
20.00	.7445	.7409	.7372	.7336	.7300	.7264	.7229	.7193	.7158	.7123	.7088	.7053
24.00	.7019	.6984	.6950	.6916	.6882	.6848	.6815	.6781	.6748	.6715	.6682	.6649
28.00	.6617	.6584	.6552	.6520	.6488	.6456	.6424	.6393	.6361	.6330	.6299	.6268
32.00	.6237	.6207	.6176	.6146	.6116	.6086	.6056	.6026	.5997	.5968	.5938	.5909
36.00	.5880	.5851	.5823	.5794	.5766	.5737	.5709	.5681	.5653	.5626	.5598	.5571
40.00	.5543	.5516	.5489	.5462	.5435	.5409	.5382	.5356	.5329	.5303	.5277	.5251
44.00	.5226	.5200	.5175	.5149	.5124	.5099	.5074	.5049	.5024	.5000	.4975	.4951
48.00	.4926	.4902	.4878	.4854	.4830	.4807	.4783	.4760	.4736	.4713	.4690	.4667
52.00	.4644	.4621	.4599	.4576	.4554	.4531	.4509	.4487	.4465	.4443	.4421	.4400
56.00	.4378	.4357	.4335	.4314	.4293	.4272	.4251	.4230	.4209	.4189	.4168	.4148
60.00	.4127	.4107	.4087	.4067	.4047	.4027	.4007	.3988	.3968	.3949	.3929	.3910
64.00	.3891	.3872	.3853	.3834	.3815	.3796	.3778	.3759	.3741	.3722	.3704	.3686
68.00	.3668	.3650	.3632	.3614	.3596	.3579	.3561	.3544	.3526	.3509	.3492	.3475
72.00	.3458	.3441	.3424	.3407	.3390	.3374	.3357	.3341	.3324	.3308	.3292	.3276
76.00	.3260	.3244	.3228	.3212	.3196	.3180	.3165	.3149	.3134	.3118	.3103	.3088
80.00	.3073	.3058	.3043	.3028	.3013	.2998	.2984	.2969	.2954	.2940	.2925	.2911
84.00	.2897	.2883	.2868	.2854	.2840	.2826	.2813	.2799	.2785	.2771	.2758	.2744
88.00	.2731	.2717	.2704	.2691	.2678	.2664	.2651	.2638	.2625	.2613	.2600	.2587
92.00	.2574	.2562	.2549	.2537	.2524	.2512	.2500	.2487	.2475	.2463	.2451	.2439
96.00	.2427	.2415	.2403	.2391	.2380	.2368	.2356	.2345	.2333	.2322	.2310	.2299
100.00	.2288	.2277	.2265	.2254	.2243	.2232	.2221	.2210	.2200	.2189	.2178	.2167
104.00	.2157	.2146	.2136	.2125	.2115	.2104	.2094	.2084	.2074	.2063	.2053	.2043
108.00	.2033	.2023	.2013	.2003	.1994	.1984	.1974	.1964	.1955	.1945	.1936	.1926
112.00	.1917	.1907	.1898	.1889	.1879	.1870	.1861	.1852	.1843	.1834	.1825	.1816
116.00	.1807	.1798	.1789	.1780	.1772	.1763	.1754	.1746	.1737	.1729	.1720	.1712
120.00	.1703	.1695	.1687	.1678	.1670	.1662	.1654	.1646	.1638	.1630	.1622	.1614
124.00	.1606	.1598	.1590	.1582	.1574	.1567	.1559	.1551	.1544	.1536	.1529	.1521
128.00	.1514	.1506	.1499	.1492	.1484	.1477	.1470	.1462	.1455	.1448	.1441	.1434
132.00	.1427	.1420	.1413	.1406	.1399	.1392	.1385	.1379	.1372	.1365	.1358	.1352
136.00	.1345	.1339	.1332	.1325	.1319	.1312	.1306	.1300	.1293	.1287	.1281	.1274
140.00	.1268	.1262	.1256	.1250	.1243	.1237	.1231	.1225	.1219	.1213	.1207	.1201
144.00	.1195	.1190	.1184	.1178	.1172	.1166	.1161	.1155	.1149	.1144	.1138	.1132
148.00	.1127	.1121	.1116	.1110	.1105	.1100	.1094	.1089	.1083	.1078	.1073	.1068
152.00	.1062	.1057	.1052	.1047	.1042	.1037	.1031	.1026	.1021	.1016	.1011	.1006
156.00	.1001	.0997	.0992	.0987	.0982	.0977	.0972	.0968	.0963	.0958	.0953	.0949

MO - 99

HALF-LIFE 67.00 HOURS CALCULATION INTERVAL .5 HOURS

HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
					HOURS					
0.0	1.0000	.9948	.9897	.9846	.9795	.9744	.9694	.9644	.9594	.9545
5.0	.9495	.9446	.9398	.9349	.9301	.9253	.9205	.9158	.9110	.9063
10.0	.9017	.8970	.8924	.8878	.8832	.8786	.8741	.8696	.8651	.8606
15.0	.8562	.8518	.8474	.8430	.8387	.8343	.8300	.8258	.8215	.8173
20.0	.8130	.8088	.8047	.8005	.7964	.7923	.7882	.7841	.7801	.7761
25.0	.7721	.7681	.7641	.7602	.7562	.7523	.7485	.7446	.7408	.7369
30.0	.7331	.7293	.7256	.7218	.7181	.7144	.7107	.7071	.7034	.6998
35.0	.6962	.6926	.6890	.6854	.6819	.6784	.6749	.6714	.6679	.6645
40.0	.6611	.6577	.6543	.6509	.6475	.6442	.6409	.6376	.6343	.6310
45.0	.6277	.6245	.6213	.6181	.6149	.6117	.6086	.6054	.6023	.5992
50.0	.5961	.5930	.5900	.5869	.5839	.5809	.5779	.5749	.5719	.5690
55.0	.5660	.5631	.5602	.5573	.5544	.5516	.5487	.5459	.5431	.5403
60.0	.5375	.5347	.5320	.5292	.5265	.5238	.5211	.5184	.5157	.5131
65.0	.5104	.5078	.5051	.5025	.5000	.4974	.4948	.4923	.4897	.4872
70.0	.4847	.4822	.4797	.4772	.4747	.4723	.4699	.4674	.4650	.4626
75.0	.4602	.4579	.4555	.4531	.4508	.4485	.4462	.4439	.4416	.4393
80.0	.4370	.4348	.4325	.4303	.4281	.4259	.4237	.4215	.4193	.4171
85.0	.4150	.4129	.4107	.4086	.4065	.4044	.4023	.4002	.3982	.3961
90.0	.3941	.3920	.3900	.3880	.3860	.3840	.3820	.3801	.3781	.3761
95.0	.3742	.3723	.3704	.3684	.3665	.3646	.3628	.3609	.3590	.3572
100.0	.3553	.3535	.3517	.3499	.3481	.3463	.3445	.3427	.3409	.3392
105.0	.3374	.3357	.3339	.3322	.3305	.3288	.3271	.3254	.3237	.3221
110.0	.3204	.3188	.3171	.3155	.3138	.3122	.3106	.3090	.3074	.3058
115.0	.3043	.3027	.3011	.2996	.2980	.2965	.2950	.2934	.2919	.2904
120.0	.2889	.2874	.2859	.2845	.2830	.2815	.2801	.2786	.2772	.2758
125.0	.2743	.2729	.2715	.2701	.2687	.2673	.2660	.2646	.2632	.2619
130.0	.2605	.2592	.2578	.2565	.2552	.2539	.2525	.2512	.2500	.2487
135.0	.2474	.2461	.2448	.2436	.2423	.2411	.2398	.2386	.2373	.2361
140.0	.2349	.2337	.2325	.2313	.2301	.2289	.2277	.2265	.2254	.2242
145.0	.2231	.2219	.2208	.2196	.2185	.2174	.2162	.2151	.2140	.2129
150.0	.2118	.2107	.2096	.2085	.2075	.2064	.2053	.2043	.2032	.2022
155.0	.2011	.2001	.1991	.1980	.1970	.1960	.1950	.1940	.1930	.1920
160.0	.1910	.1900	.1890	.1880	.1871	.1861	.1852	.1842	.1832	.1823
165.0	.1814	.1804	.1795	.1786	.1776	.1767	.1758	.1749	.1740	.1731
170.0	.1722	.1713	.1704	.1696	.1687	.1678	.1669	.1661	.1652	.1644
175.0	.1635	.1627	.1618	.1610	.1602	.1594	.1585	.1577	.1569	.1561
180.0	.1553	.1545	.1537	.1529	.1521	.1513	.1505	.1498	.1490	.1482
185.0	.1475	.1467	.1459	.1452	.1444	.1437	.1429	.1422	.1415	.1407
190.0	.1400	.1393	.1386	.1379	.1371	.1364	.1357	.1350	.1343	.1336
195.0	.1330	.1323	.1316	.1309	.1302	.1296	.1289	.1282	.1276	.1269

MO - 99

HALF-LIFE 67.00 HOURS CALCULATION INTERVAL .5 HOURS

HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
200.0	.1262	.1256	.1250	.1243	.1237	.1230	.1224	.1218	.1211	.1205
205.0	.1199	.1193	.1186	.1180	.1174	.1168	.1162	.1156	.1150	.1144
210.0	.1138	.1132	.1127	.1121	.1115	.1109	.1104	.1098	.1092	.1087
215.0	.1081	.1075	.1070	.1064	.1059	.1053	.1048	.1042	.1037	.1032
220.0	.1026	.1021	.1016	.1011	.1005	.1000	.0995	.0990	.0985	.0980
225.0	.0975	.0970	.0965	.0960	.0955	.0950	.0945	.0940	.0935	.0930
230.0	.0926	.0921	.0916	.0911	.0907	.0902	.0897	.0893	.0888	.0883
235.0	.0879	.0874	.0870	.0865	.0861	.0856	.0852	.0848	.0843	.0839
240.0	.0834	.0830	.0826	.0822	.0817	.0813	.0809	.0805	.0801	.0797
245.0	.0792	.0788	.0784	.0780	.0776	.0772	.0768	.0764	.0760	.0756
250.0	.0752	.0749	.0745	.0741	.0737	.0733	.0729	.0726	.0722	.0718
255.0	.0714	.0711	.0707	.0703	.0700	.0696	.0693	.0689	.0685	.0682
260.0	.0678	.0675	.0671	.0668	.0665	.0661	.0658	.0654	.0651	.0648
265.0	.0644	.0641	.0638	.0634	.0631	.0628	.0625	.0621	.0618	.0615
270.0	.0612	.0609	.0605	.0602	.0599	.0596	.0593	.0590	.0587	.0584
275.0	.0581	.0578	.0575	.0572	.0569	.0566	.0563	.0560	.0557	.0554
280.0	.0552	.0549	.0546	.0543	.0540	.0537	.0535	.0532	.0529	.0526
285.0	.0524	.0521	.0518	.0516	.0513	.0510	.0508	.0505	.0502	.0500
290.0	.0497	.0495	.0492	.0490	.0487	.0485	.0482	.0480	.0477	.0475
295.0	.0472	.0470	.0467	.0465	.0463	.0460	.0458	.0455	.0453	.0451
300.0	.0448	.0446	.0444	.0441	.0439	.0437	.0435	.0432	.0430	.0428
305.0	.0426	.0424	.0421	.0419	.0417	.0415	.0413	.0411	.0408	.0406
310.0	.0404	.0402	.0400	.0398	.0396	.0394	.0392	.0390	.0388	.0386
315.0	.0384	.0382	.0380	.0378	.0376	.0374	.0372	.0370	.0368	.0366
320.0	.0364	.0363	.0361	.0359	.0357	.0355	.0353	.0351	.0350	.0348
325.0	.0346	.0344	.0342	.0341	.0339	.0337	.0335	.0334	.0332	.0330
330.0	.0329	.0327	.0325	.0324	.0322	.0320	.0319	.0317	.0315	.0314
335.0	.0312	.0310	.0309	.0307	.0306	.0304	.0302	.0301	.0299	.0298
340.0	.0296	.0295	.0293	.0292	.0290	.0289	.0287	.0286	.0284	.0283
345.0	.0281	.0280	.0278	.0277	.0276	.0274	.0273	.0271	.0270	.0268
350.0	.0267	.0266	.0264	.0263	.0262	.0260	.0259	.0258	.0256	.0255
355.0	.0254	.0252	.0251	.0250	.0248	.0247	.0246	.0245	.0243	.0242
360.0	.0241	.0240	.0238	.0237	.0236	.0235	.0233	.0232	.0231	.0230
365.0	.0229	.0227	.0226	.0225	.0224	.0223	.0222	.0220	.0219	.0218
370.0	.0217	.0216	.0215	.0214	.0213	.0212	.0210	.0209	.0208	.0207
375.0	.0206	.0205	.0204	.0203	.0202	.0201	.0200	.0199	.0198	.0197
380.0	.0196	.0195	.0194	.0193	.0192	.0191	.0190	.0189	.0188	.0187
385.0	.0186	.0185	.0184	.0183	.0182	.0181	.0180	.0179	.0178	.0177
390.0	.0176	.0175	.0175	.0174	.0173	.0172	.0171	.0170	.0169	.0168
395.0	.0167	.0167	.0166	.0165	.0164	.0163	.0162	.0162	.0161	.0160

MO - 99

HALF-LIFE 67.00 HOURS CALCULATION INTERVAL .5 HOURS

HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
400.0	.0159	.0158	.0157	.0157	.0156	.0155	.0154	.0153	.0153	.0152
405.0	.0151	.0150	.0149	.0149	.0148	.0147	.0146	.0146	.0145	.0144
410.0	.0143	.0143	.0142	.0141	.0140	.0140	.0139	.0138	.0138	.0137
415.0	.0136	.0135	.0135	.0134	.0133	.0133	.0132	.0131	.0131	.0130
420.0	.0129	.0129	.0128	.0127	.0127	.0126	.0125	.0125	.0124	.0123
425.0	.0123	.0122	.0121	.0121	.0120	.0120	.0119	.0118	.0118	.0117
430.0	.0116	.0116	.0115	.0115	.0114	.0113	.0113	.0112	.0112	.0111
435.0	.0111	.0110	.0109	.0109	.0108	.0108	.0107	.0107	.0106	.0106
440.0	.0105	.0104	.0104	.0103	.0103	.0102	.0102	.0101	.0101	.0100
445.0	.0100	.0099	.0099	.0098	.0098	.0097	.0097	.0096	.0096	.0095

ND - 147

HALF-LIFE 11.10 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9974	.9948	.9922	.9896	.9870	.9845	.9819	.9793	.9768	.9743	.9717
.50	.9692	.9667	.9642	.9617	.9592	.9567	.9542	.9517	.9492	.9468	.9443	.9419
1.00	.9394	.9370	.9345	.9321	.9297	.9273	.9249	.9225	.9201	.9177	.9153	.9129
1.50	.9105	.9082	.9058	.9035	.9011	.8988	.8964	.8941	.8918	.8895	.8871	.8848
2.00	.8825	.8802	.8780	.8757	.8734	.8711	.8689	.8666	.8644	.8621	.8599	.8576
2.50	.8554	.8532	.8510	.8488	.8466	.8444	.8422	.8400	.8378	.8356	.8334	.8313
3.00	.8291	.8270	.8248	.8227	.8205	.8184	.8163	.8141	.8120	.8099	.8078	.8057
3.50	.8036	.8015	.7995	.7974	.7953	.7932	.7912	.7891	.7871	.7850	.7830	.7809
4.00	.7789	.7769	.7749	.7729	.7709	.7689	.7669	.7649	.7629	.7609	.7589	.7569
4.50	.7550	.7530	.7511	.7491	.7472	.7452	.7433	.7413	.7394	.7375	.7356	.7337
5.00	.7318	.7299	.7280	.7261	.7242	.7223	.7204	.7186	.7167	.7148	.7130	.7111
5.50	.7093	.7074	.7056	.7038	.7019	.7001	.6983	.6965	.6947	.6929	.6911	.6893
6.00	.6875	.6857	.6839	.6821	.6803	.6786	.6768	.6751	.6733	.6716	.6698	.6681
6.50	.6663	.6646	.6629	.6611	.6594	.6577	.6560	.6543	.6526	.6509	.6492	.6475
7.00	.6458	.6442	.6425	.6408	.6392	.6375	.6358	.6342	.6325	.6309	.6293	.6276
7.50	.6260	.6244	.6227	.6211	.6195	.6179	.6163	.6147	.6131	.6115	.6099	.6083
8.00	.6067	.6052	.6036	.6020	.6005	.5989	.5973	.5958	.5942	.5927	.5912	.5896
8.50	.5881	.5866	.5850	.5835	.5820	.5805	.5790	.5775	.5760	.5745	.5730	.5715
9.00	.5700	.5685	.5671	.5656	.5641	.5626	.5612	.5597	.5583	.5568	.5554	.5539
9.50	.5525	.5511	.5496	.5482	.5468	.5453	.5439	.5425	.5411	.5397	.5383	.5369
10.00	.5355	.5341	.5327	.5313	.5300	.5286	.5272	.5258	.5245	.5231	.5217	.5204
10.50	.5190	.5177	.5163	.5150	.5137	.5123	.5110	.5097	.5083	.5070	.5057	.5044
11.00	.5031	.5018	.5005	.4992	.4979	.4966	.4953	.4940	.4927	.4914	.4902	.4889
11.50	.4876	.4863	.4851	.4838	.4826	.4813	.4801	.4788	.4776	.4763	.4751	.4739
12.00	.4726	.4714	.4702	.4690	.4677	.4665	.4653	.4641	.4629	.4617	.4605	.4593
12.50	.4581	.4569	.4557	.4545	.4534	.4522	.4510	.4498	.4487	.4475	.4463	.4452
13.00	.4440	.4429	.4417	.4406	.4394	.4383	.4371	.4360	.4349	.4337	.4326	.4315
13.50	.4304	.4292	.4281	.4270	.4259	.4248	.4237	.4226	.4215	.4204	.4193	.4182
14.00	.4171	.4160	.4150	.4139	.4128	.4117	.4107	.4096	.4085	.4075	.4064	.4054
14.50	.4043	.4033	.4022	.4012	.4001	.3991	.3980	.3970	.3960	.3949	.3939	.3929
15.00	.3919	.3909	.3898	.3888	.3878	.3868	.3858	.3848	.3838	.3828	.3818	.3808
15.50	.3798	.3788	.3779	.3769	.3759	.3749	.3739	.3730	.3720	.3710	.3701	.3691
16.00	.3682	.3672	.3662	.3653	.3643	.3634	.3624	.3615	.3606	.3596	.3587	.3578
16.50	.3568	.3559	.3550	.3541	.3531	.3522	.3513	.3504	.3495	.3486	.3477	.3468
17.00	.3459	.3450	.3441	.3432	.3423	.3414	.3405	.3396	.3387	.3379	.3370	.3361
17.50	.3352	.3344	.3335	.3326	.3318	.3309	.3300	.3292	.3283	.3275	.3266	.3258
18.00	.3249	.3241	.3232	.3224	.3216	.3207	.3199	.3191	.3182	.3174	.3166	.3158
18.50	.3149	.3141	.3133	.3125	.3117	.3109	.3101	.3092	.3084	.3076	.3068	.3060
19.00	.3053	.3045	.3037	.3029	.3021	.3013	.3005	.2997	.2990	.2982	.2974	.2966
19.50	.2959	.2951	.2943	.2936	.2928	.2920	.2913	.2905	.2898	.2890	.2883	.2875

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HALF-LIFE 11.10 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
20.00	.2868	.2860	.2853	.2845	.2838	.2831	.2823	.2816	.2809	.2801	.2794	.2787
20.50	.2780	.2772	.2765	.2758	.2751	.2744	.2736	.2729	.2722	.2715	.2708	.2701
21.00	.2694	.2687	.2680	.2673	.2666	.2659	.2652	.2645	.2639	.2632	.2625	.2618
21.50	.2611	.2604	.2598	.2591	.2584	.2577	.2571	.2564	.2557	.2551	.2544	.2538
22.00	.2531	.2524	.2518	.2511	.2505	.2498	.2492	.2485	.2479	.2472	.2466	.2460
22.50	.2453	.2447	.2440	.2434	.2428	.2421	.2415	.2409	.2403	.2396	.2390	.2384
23.00	.2378	.2372	.2365	.2359	.2353	.2347	.2341	.2335	.2329	.2323	.2317	.2311
23.50	.2305	.2299	.2293	.2287	.2281	.2275	.2269	.2263	.2257	.2251	.2245	.2240
24.00	.2234	.2228	.2222	.2216	.2211	.2205	.2199	.2193	.2188	.2182	.2176	.2171
24.50	.2165	.2159	.2154	.2148	.2143	.2137	.2132	.2126	.2120	.2115	.2109	.2104
25.00	.2098	.2093	.2088	.2082	.2077	.2071	.2066	.2061	.2055	.2050	.2045	.2039
25.50	.2034	.2029	.2023	.2018	.2013	.2008	.2002	.1997	.1992	.1987	.1982	.1977
26.00	.1971	.1966	.1961	.1956	.1951	.1946	.1941	.1936	.1931	.1926	.1921	.1916
26.50	.1911	.1906	.1901	.1896	.1891	.1886	.1881	.1876	.1871	.1867	.1862	.1857
27.00	.1852	.1847	.1842	.1838	.1833	.1828	.1823	.1819	.1814	.1809	.1804	.1800
27.50	.1795	.1790	.1786	.1781	.1777	.1772	.1767	.1763	.1758	.1754	.1749	.1744
28.00	.1740	.1735	.1731	.1726	.1722	.1717	.1713	.1709	.1704	.1700	.1695	.1691
28.50	.1686	.1682	.1678	.1673	.1669	.1665	.1660	.1656	.1652	.1647	.1643	.1639
29.00	.1635	.1630	.1626	.1622	.1618	.1613	.1609	.1605	.1601	.1597	.1593	.1588
29.50	.1584	.1580	.1576	.1572	.1568	.1564	.1560	.1556	.1552	.1548	.1544	.1540
30.00	.1536	.1532	.1528	.1524	.1520	.1516	.1512	.1508	.1504	.1500	.1496	.1492
30.50	.1488	.1484	.1481	.1477	.1473	.1469	.1465	.1461	.1458	.1454	.1450	.1446
31.00	.1443	.1439	.1435	.1431	.1428	.1424	.1420	.1417	.1413	.1409	.1406	.1402
31.50	.1398	.1395	.1391	.1387	.1384	.1380	.1377	.1373	.1369	.1366	.1362	.1359
32.00	.1355	.1352	.1348	.1345	.1341	.1338	.1334	.1331	.1327	.1324	.1320	.1317
32.50	.1314	.1310	.1307	.1303	.1300	.1297	.1293	.1290	.1286	.1283	.1280	.1276
33.00	.1273	.1270	.1267	.1263	.1260	.1257	.1253	.1250	.1247	.1244	.1240	.1237
33.50	.1234	.1231	.1228	.1224	.1221	.1218	.1215	.1212	.1209	.1205	.1202	.1199
34.00	.1196	.1193	.1190	.1187	.1184	.1181	.1178	.1174	.1171	.1168	.1165	.1162
34.50	.1159	.1156	.1153	.1150	.1147	.1144	.1141	.1138	.1135	.1132	.1129	.1127
35.00	.1124	.1121	.1118	.1115	.1112	.1109	.1106	.1103	.1100	.1098	.1095	.1092
35.50	.1089	.1086	.1083	.1081	.1078	.1075	.1072	.1069	.1067	.1064	.1061	.1058
36.00	.1056	.1053	.1050	.1047	.1045	.1042	.1039	.1037	.1034	.1031	.1028	.1026
36.50	.1023	.1020	.1018	.1015	.1013	.1010	.1007	.1005	.1002	.0999	.0997	.0994
37.00	.0992	.0989	.0987	.0984	.0981	.0979	.0976	.0974	.0971	.0969	.0966	.0964
37.50	.0961	.0959	.0956	.0954	.0951	.0949	.0946	.0944	.0941	.0939	.0936	.0934
38.00	.0932	.0929	.0927	.0924	.0922	.0920	.0917	.0915	.0912	.0910	.0908	.0905
38.50	.0903	.0901	.0898	.0896	.0894	.0891	.0889	.0887	.0884	.0882	.0880	.0877
39.00	.0875	.0873	.0871	.0868	.0866	.0864	.0862	.0859	.0857	.0855	.0853	.0850
39.50	.0848	.0846	.0844	.0842	.0839	.0837	.0835	.0833	.0831	.0829	.0826	.0824

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HALF-LIFE 11.10 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
40.00	.0822	.0820	.0818	.0816	.0814	.0812	.0809	.0807	.0805	.0803	.0801	.0799
40.50	.0797	.0795	.0793	.0791	.0789	.0787	.0785	.0782	.0780	.0778	.0776	.0774
41.00	.0772	.0770	.0768	.0766	.0764	.0762	.0760	.0758	.0756	.0754	.0753	.0751
41.50	.0749	.0747	.0745	.0743	.0741	.0739	.0737	.0735	.0733	.0731	.0729	.0727
42.00	.0726	.0724	.0722	.0720	.0718	.0716	.0714	.0712	.0711	.0709	.0707	.0705
42.50	.0703	.0701	.0700	.0698	.0696	.0694	.0692	.0691	.0689	.0687	.0685	.0683
43.00	.0682	.0680	.0678	.0676	.0675	.0673	.0671	.0669	.0668	.0666	.0664	.0662
43.50	.0661	.0659	.0657	.0656	.0654	.0652	.0650	.0649	.0647	.0645	.0644	.0642
44.00	.0640	.0639	.0637	.0635	.0634	.0632	.0630	.0629	.0627	.0625	.0624	.0622
44.50	.0621	.0619	.0617	.0616	.0614	.0613	.0611	.0609	.0608	.0606	.0605	.0603
45.00	.0602	.0600	.0598	.0597	.0595	.0594	.0592	.0591	.0589	.0588	.0586	.0585
45.50	.0583	.0582	.0580	.0578	.0577	.0575	.0574	.0572	.0571	.0570	.0568	.0567
46.00	.0565	.0564	.0562	.0561	.0559	.0558	.0556	.0555	.0553	.0552	.0551	.0549
46.50	.0548	.0546	.0545	.0543	.0542	.0541	.0539	.0538	.0536	.0535	.0534	.0532
47.00	.0531	.0529	.0528	.0527	.0525	.0524	.0523	.0521	.0520	.0519	.0517	.0516
47.50	.0515	.0513	.0512	.0511	.0509	.0508	.0507	.0505	.0504	.0503	.0501	.0500
48.00	.0499	.0497	.0496	.0495	.0494	.0492	.0491	.0490	.0488	.0487	.0486	.0485
48.50	.0483	.0482	.0481	.0480	.0478	.0477	.0476	.0475	.0473	.0472	.0471	.0470
49.00	.0468	.0467	.0466	.0465	.0464	.0462	.0461	.0460	.0459	.0458	.0456	.0455
49.50	.0454	.0453	.0452	.0451	.0449	.0448	.0447	.0446	.0445	.0444	.0442	.0441
50.00	.0440	.0439	.0438	.0437	.0436	.0434	.0433	.0432	.0431	.0430	.0429	.0428
50.50	.0427	.0425	.0424	.0423	.0422	.0421	.0420	.0419	.0418	.0417	.0416	.0414
51.00	.0413	.0412	.0411	.0410	.0409	.0408	.0407	.0406	.0405	.0404	.0403	.0402
51.50	.0401	.0400	.0399	.0398	.0397	.0396	.0394	.0393	.0392	.0391	.0390	.0389
52.00	.0388	.0387	.0386	.0385	.0384	.0383	.0382	.0381	.0380	.0379	.0378	.0377
52.50	.0376	.0375	.0374	.0373	.0372	.0372	.0371	.0370	.0369	.0368	.0367	.0366
53.00	.0365	.0364	.0363	.0362	.0361	.0360	.0359	.0358	.0357	.0356	.0355	.0355
53.50	.0354	.0353	.0352	.0351	.0350	.0349	.0348	.0347	.0346	.0345	.0344	.0344
54.00	.0343	.0342	.0341	.0340	.0339	.0338	.0337	.0337	.0336	.0335	.0334	.0333
54.50	.0332	.0331	.0330	.0330	.0329	.0328	.0327	.0326	.0325	.0324	.0324	.0323
55.00	.0322	.0321	.0320	.0319	.0319	.0318	.0317	.0316	.0315	.0314	.0314	.0313
55.50	.0312	.0311	.0310	.0310	.0309	.0308	.0307	.0306	.0306	.0305	.0304	.0303
56.00	.0302	.0302	.0301	.0300	.0299	.0298	.0298	.0297	.0296	.0295	.0295	.0294
56.50	.0293	.0292	.0292	.0291	.0290	.0289	.0289	.0288	.0287	.0286	.0286	.0285
57.00	.0284	.0283	.0283	.0282	.0281	.0280	.0280	.0279	.0278	.0277	.0277	.0276
57.50	.0275	.0275	.0274	.0273	.0272	.0272	.0271	.0270	.0270	.0269	.0268	.0268
58.00	.0267	.0266	.0265	.0265	.0264	.0263	.0263	.0262	.0261	.0261	.0260	.0259
58.50	.0259	.0258	.0257	.0257	.0256	.0255	.0255	.0254	.0253	.0253	.0252	.0251
59.00	.0251	.0250	.0249	.0249	.0248	.0247	.0247	.0246	.0245	.0245	.0244	.0244
59.50	.0243	.0242	.0242	.0241	.0240	.0240	.0239	.0239	.0238	.0237	.0237	.0236

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HALF-LIFE 11.10 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
60.00	.0235	.0235	.0234	.0234	.0233	.0232	.0232	.0231	.0231	.0230	.0229	.0229
60.50	.0228	.0228	.0227	.0226	.0226	.0225	.0225	.0224	.0223	.0223	.0222	.0222
61.00	.0221	.0221	.0220	.0219	.0219	.0218	.0218	.0217	.0217	.0216	.0215	.0215
61.50	.0214	.0214	.0213	.0213	.0212	.0212	.0211	.0210	.0210	.0209	.0209	.0208
62.00	.0208	.0207	.0207	.0206	.0206	.0205	.0205	.0204	.0203	.0203	.0202	.0202
62.50	.0201	.0201	.0200	.0200	.0199	.0199	.0198	.0198	.0197	.0197	.0196	.0196
63.00	.0195	.0195	.0194	.0194	.0193	.0193	.0192	.0192	.0191	.0191	.0190	.0190
63.50	.0189	.0189	.0188	.0188	.0187	.0187	.0186	.0186	.0185	.0185	.0184	.0184
64.00	.0183	.0183	.0182	.0182	.0181	.0181	.0180	.0180	.0180	.0179	.0179	.0178
64.50	.0178	.0177	.0177	.0176	.0176	.0175	.0175	.0174	.0174	.0174	.0173	.0173
65.00	.0172	.0172	.0171	.0171	.0170	.0170	.0170	.0169	.0169	.0168	.0168	.0167
65.50	.0167	.0166	.0166	.0166	.0165	.0165	.0164	.0164	.0163	.0163	.0163	.0162
66.00	.0162	.0161	.0161	.0160	.0160	.0160	.0159	.0159	.0158	.0158	.0158	.0157
66.50	.0157	.0156	.0156	.0156	.0155	.0155	.0154	.0154	.0153	.0153	.0153	.0152
67.00	.0152	.0152	.0151	.0151	.0150	.0150	.0150	.0149	.0149	.0148	.0148	.0148
67.50	.0147	.0147	.0146	.0146	.0146	.0145	.0145	.0145	.0144	.0144	.0143	.0143
68.00	.0143	.0142	.0142	.0142	.0141	.0141	.0140	.0140	.0140	.0139	.0139	.0139
68.50	.0138	.0138	.0138	.0137	.0137	.0136	.0136	.0136	.0135	.0135	.0135	.0134
69.00	.0134	.0134	.0133	.0133	.0133	.0132	.0132	.0132	.0131	.0131	.0131	.0130
69.50	.0130	.0130	.0129	.0129	.0129	.0128	.0128	.0128	.0127	.0127	.0127	.0126
70.00	.0126	.0126	.0125	.0125	.0125	.0124	.0124	.0124	.0123	.0123	.0123	.0122
70.50	.0122	.0122	.0121	.0121	.0121	.0120	.0120	.0120	.0119	.0119	.0119	.0119
71.00	.0118	.0118	.0118	.0117	.0117	.0117	.0116	.0116	.0116	.0115	.0115	.0115
71.50	.0115	.0114	.0114	.0114	.0113	.0113	.0113	.0112	.0112	.0112	.0112	.0111
72.00	.0111	.0111	.0110	.0110	.0110	.0110	.0109	.0109	.0109	.0108	.0108	.0108
72.50	.0108	.0107	.0107	.0107	.0106	.0106	.0106	.0106	.0105	.0105	.0105	.0105
73.00	.0104	.0104	.0104	.0103	.0103	.0103	.0103	.0102	.0102	.0102	.0102	.0101
73.50	.0101	.0101	.0101	.0100	.0100	.0100	.0099	.0099	.0099	.0099	.0098	.0098

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HALF-LIFE 120.00 YEARS CALCULATION INTERVAL 1.0 YEARS

YEARS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	1.0000	.9942	.9885	.9828	.9771	.9715	.9659	.9603	.9548	.9493
10.0	.9438	.9384	.9330	.9276	.9223	.9170	.9117	.9064	.9012	.8960
20.0	.8908	.8857	.8806	.8755	.8705	.8655	.8605	.8555	.8506	.8457
30.0	.8408	.8360	.8312	.8264	.8216	.8169	.8122	.8075	.8029	.7982
40.0	.7937	.7891	.7845	.7800	.7755	.7711	.7666	.7622	.7578	.7534
50.0	.7491	.7448	.7405	.7362	.7320	.7278	.7236	.7194	.7153	.7112
60.0	.7071	.7030	.6989	.6949	.6909	.6869	.6830	.6790	.6751	.6712
70.0	.6674	.6635	.6597	.6559	.6521	.6484	.6446	.6409	.6372	.6336
80.0	.6299	.6263	.6227	.6191	.6155	.6120	.6085	.6049	.6015	.5980
90.0	.5946	.5911	.5877	.5843	.5810	.5776	.5743	.5710	.5677	.5644
100.0	.5612	.5579	.5547	.5515	.5484	.5452	.5421	.5389	.5358	.5328
110.0	.5297	.5266	.5236	.5206	.5176	.5146	.5116	.5087	.5058	.5028
120.0	.5000	.4971	.4942	.4914	.4885	.4857	.4829	.4801	.4774	.4746
130.0	.4719	.4692	.4665	.4638	.4611	.4585	.4558	.4532	.4506	.4480
140.0	.4454	.4428	.4403	.4377	.4352	.4327	.4302	.4277	.4253	.4228
150.0	.4204	.4180	.4156	.4132	.4108	.4084	.4061	.4037	.4014	.3991
160.0	.3968	.3945	.3922	.3900	.3877	.3855	.3833	.3811	.3789	.3767
170.0	.3745	.3724	.3702	.3681	.3660	.3639	.3618	.3597	.3576	.3556
180.0	.3535	.3515	.3494	.3474	.3454	.3434	.3415	.3395	.3375	.3356
190.0	.3337	.3317	.3298	.3279	.3260	.3242	.3223	.3204	.3186	.3168
200.0	.3149	.3131	.3113	.3095	.3077	.3060	.3042	.3024	.3007	.2990
210.0	.2973	.2955	.2938	.2921	.2905	.2888	.2871	.2855	.2838	.2822
220.0	.2806	.2789	.2773	.2757	.2742	.2726	.2710	.2694	.2679	.2664
230.0	.2648	.2633	.2618	.2603	.2588	.2573	.2558	.2543	.2529	.2514
240.0	.2500	.2485	.2471	.2457	.2442	.2428	.2414	.2400	.2387	.2373
250.0	.2359	.2346	.2332	.2319	.2305	.2292	.2279	.2266	.2253	.2240
260.0	.2227	.2214	.2201	.2188	.2176	.2163	.2151	.2138	.2126	.2114
270.0	.2102	.2090	.2078	.2066	.2054	.2042	.2030	.2018	.2007	.1995
280.0	.1984	.1972	.1961	.1950	.1938	.1927	.1916	.1905	.1894	.1883
290.0	.1872	.1862	.1851	.1840	.1830	.1819	.1809	.1798	.1788	.1778
300.0	.1767	.1757	.1747	.1737	.1727	.1717	.1707	.1697	.1687	.1678
310.0	.1668	.1658	.1649	.1639	.1630	.1621	.1611	.1602	.1593	.1584
320.0	.1574	.1565	.1556	.1547	.1538	.1530	.1521	.1512	.1503	.1495
330.0	.1486	.1477	.1469	.1460	.1452	.1444	.1435	.1427	.1419	.1411
340.0	.1403	.1394	.1386	.1378	.1371	.1363	.1355	.1347	.1339	.1332
350.0	.1324	.1316	.1309	.1301	.1294	.1286	.1279	.1271	.1264	.1257
360.0	.1250	.1242	.1235	.1228	.1221	.1214	.1207	.1200	.1193	.1186
370.0	.1179	.1173	.1166	.1159	.1152	.1146	.1139	.1133	.1126	.1120
380.0	.1113	.1107	.1100	.1094	.1088	.1081	.1075	.1069	.1063	.1057
390.0	.1051	.1045	.1039	.1033	.1027	.1021	.1015	.1009	.1003	.0997

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HALF-LIFE 120.00 YEARS CALCULATION INTERVAL 1.0 YEARS

YEARS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
400.0	.0992	.0986	.0980	.0975	.0969	.0963	.0958	.0952	.0947	.0941
410.0	.0936	.0931	.0925	.0920	.0915	.0909	.0904	.0899	.0894	.0889
420.0	.0883	.0878	.0873	.0868	.0863	.0858	.0853	.0848	.0843	.0839
430.0	.0834	.0829	.0824	.0819	.0815	.0810	.0805	.0801	.0796	.0792
440.0	.0787	.0782	.0778	.0773	.0769	.0765	.0760	.0756	.0751	.0747
450.0	.0743	.0738	.0734	.0730	.0726	.0722	.0717	.0713	.0709	.0705
460.0	.0701	.0697	.0693	.0689	.0685	.0681	.0677	.0673	.0669	.0666
470.0	.0662	.0658	.0654	.0650	.0647	.0643	.0639	.0635	.0632	.0628
480.0	.0625	.0621	.0617	.0614	.0610	.0607	.0603	.0600	.0596	.0593
490.0	.0589	.0586	.0583	.0579	.0576	.0573	.0569	.0566	.0563	.0560
500.0	.0556	.0553	.0550	.0547	.0544	.0540	.0537	.0534	.0531	.0528
510.0	.0525	.0522	.0519	.0516	.0513	.0510	.0507	.0504	.0501	.0498
520.0	.0496	.0493	.0490	.0487	.0484	.0481	.0479	.0476	.0473	.0470
530.0	.0468	.0465	.0462	.0460	.0457	.0454	.0452	.0449	.0447	.0444
540.0	.0441	.0439	.0436	.0434	.0431	.0429	.0426	.0424	.0421	.0419
550.0	.0417	.0414	.0412	.0409	.0407	.0405	.0402	.0400	.0398	.0396
560.0	.0393	.0391	.0389	.0386	.0384	.0382	.0380	.0378	.0375	.0373
570.0	.0371	.0369	.0367	.0365	.0363	.0361	.0358	.0356	.0354	.0352
580.0	.0350	.0348	.0346	.0344	.0342	.0340	.0338	.0336	.0334	.0333
590.0	.0331	.0329	.0327	.0325	.0323	.0321	.0319	.0317	.0316	.0314
600.0	.0312	.0310	.0308	.0307	.0305	.0303	.0301	.0300	.0298	.0296
610.0	.0294	.0293	.0291	.0289	.0288	.0286	.0284	.0283	.0281	.0280
620.0	.0278	.0276	.0275	.0273	.0272	.0270	.0268	.0267	.0265	.0264
630.0	.0262	.0261	.0259	.0258	.0256	.0255	.0253	.0252	.0250	.0249
640.0	.0248	.0246	.0245	.0243	.0242	.0240	.0239	.0238	.0236	.0235
650.0	.0234	.0232	.0231	.0230	.0228	.0227	.0226	.0224	.0223	.0222
660.0	.0220	.0219	.0218	.0217	.0215	.0214	.0213	.0212	.0210	.0209
670.0	.0208	.0207	.0206	.0204	.0203	.0202	.0201	.0200	.0199	.0198
680.0	.0196	.0195	.0194	.0193	.0192	.0191	.0190	.0189	.0187	.0186
690.0	.0185	.0184	.0183	.0182	.0181	.0180	.0179	.0178	.0177	.0176
700.0	.0175	.0174	.0173	.0172	.0171	.0170	.0169	.0168	.0167	.0166
710.0	.0165	.0164	.0163	.0162	.0161	.0160	.0159	.0158	.0158	.0157
720.0	.0156	.0155	.0154	.0153	.0152	.0151	.0150	.0150	.0149	.0148
730.0	.0147	.0146	.0145	.0144	.0144	.0143	.0142	.0141	.0140	.0140
740.0	.0139	.0138	.0137	.0136	.0136	.0135	.0134	.0133	.0132	.0132
750.0	.0131	.0130	.0129	.0129	.0128	.0127	.0126	.0126	.0125	.0124
760.0	.0124	.0123	.0122	.0121	.0121	.0120	.0119	.0119	.0118	.0117
770.0	.0117	.0116	.0115	.0115	.0114	.0113	.0113	.0112	.0111	.0111
780.0	.0110	.0109	.0109	.0108	.0107	.0107	.0106	.0106	.0105	.0104
790.0	.0104	.0103	.0103	.0102	.0101	.0101	.0100	.0100	.0099	.0099

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HALF-LIFE 35.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
0.00	1.0000	.9950	.9901	.9852	.9803	.9755	.9707	.9659	.9611	.9564	.9516	.9469
3.00	.9423	.9376	.9330	.9284	.9238	.9192	.9147	.9102	.9057	.9012	.8967	.8923
6.00	.8879	.8835	.8792	.8748	.8705	.8662	.8619	.8577	.8534	.8492	.8450	.8408
9.00	.8367	.8326	.8284	.8244	.8203	.8162	.8122	.8082	.8042	.8002	.7963	.7923
12.00	.7884	.7845	.7807	.7768	.7730	.7691	.7653	.7616	.7578	.7541	.7503	.7466
15.00	.7429	.7393	.7356	.7320	.7284	.7248	.7212	.7176	.7141	.7106	.7071	.7036
18.00	.7001	.6966	.6932	.6898	.6864	.6830	.6796	.6762	.6729	.6696	.6663	.6630
21.00	.6597	.6564	.6532	.6500	.6468	.6436	.6404	.6372	.6341	.6310	.6278	.6247
24.00	.6216	.6186	.6155	.6125	.6095	.6064	.6035	.6005	.5975	.5946	.5916	.5887
27.00	.5858	.5829	.5800	.5771	.5743	.5715	.5686	.5658	.5630	.5603	.5575	.5547
30.00	.5520	.5493	.5466	.5439	.5412	.5385	.5358	.5332	.5306	.5279	.5253	.5227
33.00	.5202	.5176	.5150	.5125	.5100	.5074	.5049	.5024	.5000	.4975	.4950	.4926
36.00	.4901	.4877	.4853	.4829	.4805	.4782	.4758	.4734	.4711	.4688	.4665	.4642
39.00	.4619	.4596	.4573	.4551	.4528	.4506	.4483	.4461	.4439	.4417	.4396	.4374
42.00	.4352	.4331	.4309	.4288	.4267	.4246	.4225	.4204	.4183	.4163	.4142	.4122
45.00	.4101	.4081	.4061	.4041	.4021	.4001	.3981	.3961	.3942	.3922	.3903	.3884
48.00	.3865	.3845	.3826	.3808	.3789	.3770	.3751	.3733	.3714	.3696	.3678	.3660
51.00	.3642	.3624	.3606	.3588	.3570	.3553	.3535	.3518	.3500	.3483	.3466	.3449
54.00	.3432	.3415	.3398	.3381	.3364	.3348	.3331	.3315	.3298	.3282	.3266	.3250
57.00	.3234	.3218	.3202	.3186	.3170	.3155	.3139	.3123	.3108	.3093	.3077	.3062
60.00	.3047	.3032	.3017	.3002	.2987	.2973	.2958	.2943	.2929	.2914	.2900	.2885
63.00	.2871	.2857	.2843	.2829	.2815	.2801	.2787	.2773	.2760	.2746	.2733	.2719
66.00	.2706	.2692	.2679	.2666	.2653	.2639	.2626	.2613	.2601	.2588	.2575	.2562
69.00	.2550	.2537	.2524	.2512	.2500	.2487	.2475	.2463	.2450	.2438	.2426	.2414
72.00	.2402	.2391	.2379	.2367	.2355	.2344	.2332	.2321	.2309	.2298	.2286	.2275
75.00	.2264	.2253	.2241	.2230	.2219	.2208	.2198	.2187	.2176	.2165	.2154	.2144
78.00	.2133	.2123	.2112	.2102	.2091	.2081	.2071	.2061	.2050	.2040	.2030	.2020
81.00	.2010	.2000	.1990	.1980	.1971	.1961	.1951	.1942	.1932	.1922	.1913	.1904
84.00	.1894	.1885	.1875	.1866	.1857	.1848	.1839	.1830	.1821	.1812	.1803	.1794
87.00	.1785	.1776	.1767	.1759	.1750	.1741	.1733	.1724	.1716	.1707	.1699	.1690
90.00	.1682	.1674	.1665	.1657	.1649	.1641	.1633	.1625	.1617	.1609	.1601	.1593
93.00	.1585	.1577	.1569	.1561	.1554	.1546	.1538	.1531	.1523	.1516	.1508	.1501
96.00	.1493	.1486	.1479	.1471	.1464	.1457	.1450	.1442	.1435	.1428	.1421	.1414
99.00	.1407	.1400	.1393	.1386	.1380	.1373	.1366	.1359	.1353	.1346	.1339	.1333
102.00	.1326	.1319	.1313	.1306	.1300	.1294	.1287	.1281	.1275	.1268	.1262	.1256
105.00	.1250	.1243	.1237	.1231	.1225	.1219	.1213	.1207	.1201	.1195	.1189	.1183
108.00	.1177	.1172	.1166	.1160	.1154	.1149	.1143	.1137	.1132	.1126	.1120	.1115
111.00	.1109	.1104	.1099	.1093	.1088	.1082	.1077	.1072	.1066	.1061	.1056	.1051
114.00	.1045	.1040	.1035	.1030	.1025	.1020	.1015	.1010	.1005	.1000	.0995	.0990

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HALF-LIFE 14.22 DAYS CALCULATION INTERVAL 3.0 HOURS

DAYS	HOURS 0.0	3.0	6.0	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.0
0.00	1.0000	.9939	.9878	.9818	.9759	.9699	.9641	.9582	.9524	.9466	.9408	.9351
1.50	.9294	.9238	.9182	.9126	.9071	.9016	.8961	.8906	.8852	.8798	.8745	.8692
3.00	.8639	.8587	.8534	.8483	.8431	.8380	.8329	.8278	.8228	.8178	.8128	.8079
4.50	.8030	.7981	.7933	.7884	.7837	.7789	.7742	.7695	.7648	.7601	.7555	.7509
6.00	.7464	.7418	.7373	.7328	.7284	.7240	.7196	.7152	.7109	.7065	.7022	.6980
7.50	.6937	.6895	.6853	.6812	.6770	.6729	.6688	.6648	.6607	.6567	.6527	.6488
9.00	.6448	.6409	.6370	.6331	.6293	.6255	.6217	.6179	.6141	.6104	.6067	.6030
10.50	.5994	.5957	.5921	.5885	.5849	.5814	.5778	.5743	.5708	.5674	.5639	.5605
12.00	.5571	.5537	.5503	.5470	.5437	.5404	.5371	.5338	.5306	.5274	.5242	.5210
13.50	.5178	.5147	.5115	.5084	.5053	.5023	.4992	.4962	.4932	.4902	.4872	.4842
15.00	.4813	.4784	.4755	.4726	.4697	.4669	.4640	.4612	.4584	.4556	.4528	.4501
16.50	.4474	.4446	.4419	.4393	.4366	.4339	.4313	.4287	.4261	.4235	.4209	.4184
18.00	.4158	.4133	.4108	.4083	.4058	.4033	.4009	.3984	.3960	.3936	.3912	.3889
19.50	.3865	.3841	.3818	.3795	.3772	.3749	.3726	.3704	.3681	.3659	.3636	.3614
21.00	.3592	.3571	.3549	.3527	.3506	.3485	.3463	.3442	.3421	.3401	.3380	.3359
22.50	.3339	.3319	.3299	.3279	.3259	.3239	.3219	.3200	.3180	.3161	.3142	.3123
24.00	.3104	.3085	.3066	.3047	.3029	.3010	.2992	.2974	.2956	.2938	.2920	.2902
25.50	.2885	.2867	.2850	.2832	.2815	.2798	.2781	.2764	.2747	.2731	.2714	.2698
27.00	.2681	.2665	.2649	.2633	.2617	.2601	.2585	.2569	.2554	.2538	.2523	.2507
28.50	.2492	.2477	.2462	.2447	.2432	.2417	.2403	.2388	.2374	.2359	.2345	.2331
30.00	.2316	.2302	.2288	.2274	.2261	.2247	.2233	.2220	.2206	.2193	.2179	.2166
31.50	.2153	.2140	.2127	.2114	.2101	.2088	.2076	.2063	.2051	.2038	.2026	.2013
33.00	.2001	.1989	.1977	.1965	.1953	.1941	.1929	.1918	.1906	.1894	.1883	.1871
34.50	.1860	.1849	.1838	.1826	.1815	.1804	.1793	.1782	.1772	.1761	.1750	.1739
36.00	.1729	.1718	.1708	.1698	.1687	.1677	.1667	.1657	.1647	.1637	.1627	.1617
37.50	.1607	.1597	.1588	.1578	.1568	.1559	.1549	.1540	.1530	.1521	.1512	.1503
39.00	.1494	.1485	.1476	.1467	.1458	.1449	.1440	.1431	.1423	.1414	.1405	.1397
40.50	.1388	.1380	.1371	.1363	.1355	.1347	.1338	.1330	.1322	.1314	.1306	.1298
42.00	.1290	.1283	.1275	.1267	.1259	.1252	.1244	.1236	.1229	.1221	.1214	.1207
43.50	.1199	.1192	.1185	.1178	.1170	.1163	.1156	.1149	.1142	.1135	.1128	.1122
45.00	.1115	.1108	.1101	.1095	.1088	.1081	.1075	.1068	.1062	.1055	.1049	.1042
46.50	.1036	.1030	.1024	.1017	.1011	.1005	.0999	.0993	.0987	.0981	.0975	.0969

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HALF-LIFE 89.00 YEARS CALCULATION INTERVAL .5 YEARS

YEARS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
0.0	1.0000	.9961	.9922	.9883	.9845	.9807	.9769	.9731	.9693	.9655
5.0	.9618	.9580	.9543	.9506	.9469	.9432	.9395	.9359	.9323	.9286
10.0	.9250	.9214	.9178	.9143	.9107	.9072	.9037	.9001	.8966	.8932
15.0	.8897	.8862	.8828	.8794	.8759	.8725	.8691	.8658	.8624	.8591
20.0	.8557	.8524	.8491	.8458	.8425	.8392	.8359	.8327	.8295	.8262
25.0	.8230	.8198	.8166	.8135	.8103	.8072	.8040	.8009	.7978	.7947
30.0	.7916	.7885	.7855	.7824	.7794	.7763	.7733	.7703	.7673	.7643
35.0	.7614	.7584	.7555	.7525	.7496	.7467	.7438	.7409	.7380	.7351
40.0	.7323	.7294	.7266	.7238	.7210	.7182	.7154	.7126	.7098	.7071
45.0	.7043	.7016	.6988	.6961	.6934	.6907	.6880	.6854	.6827	.6801
50.0	.6774	.6748	.6722	.6695	.6669	.6643	.6618	.6592	.6566	.6541
55.0	.6515	.6490	.6465	.6440	.6415	.6390	.6365	.6340	.6315	.6291
60.0	.6266	.6242	.6218	.6194	.6170	.6146	.6122	.6098	.6074	.6051
65.0	.6027	.6004	.5980	.5957	.5934	.5911	.5888	.5865	.5842	.5820
70.0	.5797	.5774	.5752	.5730	.5707	.5685	.5663	.5641	.5619	.5597
75.0	.5576	.5554	.5532	.5511	.5489	.5468	.5447	.5426	.5404	.5383
80.0	.5363	.5342	.5321	.5300	.5280	.5259	.5239	.5218	.5198	.5178
85.0	.5158	.5138	.5118	.5098	.5078	.5058	.5039	.5019	.5000	.4980
90.0	.4961	.4941	.4922	.4903	.4884	.4865	.4846	.4827	.4809	.4790
95.0	.4771	.4753	.4734	.4716	.4697	.4679	.4661	.4643	.4625	.4607
100.0	.4589	.4571	.4553	.4536	.4518	.4500	.4483	.4466	.4448	.4431
105.0	.4414	.4397	.4379	.4362	.4345	.4329	.4312	.4295	.4278	.4262
110.0	.4245	.4229	.4212	.4196	.4179	.4163	.4147	.4131	.4115	.4099
115.0	.4083	.4067	.4051	.4036	.4020	.4004	.3989	.3973	.3958	.3942
120.0	.3927	.3912	.3897	.3881	.3866	.3851	.3836	.3821	.3807	.3792
125.0	.3777	.3762	.3748	.3733	.3719	.3704	.3690	.3675	.3661	.3647
130.0	.3633	.3619	.3605	.3591	.3577	.3563	.3549	.3535	.3521	.3508
135.0	.3494	.3480	.3467	.3453	.3440	.3427	.3413	.3400	.3387	.3374
140.0	.3361	.3347	.3334	.3321	.3309	.3296	.3283	.3270	.3257	.3245
145.0	.3232	.3220	.3207	.3195	.3182	.3170	.3157	.3145	.3133	.3121
150.0	.3109	.3097	.3085	.3073	.3061	.3049	.3037	.3025	.3013	.3002
155.0	.2990	.2978	.2967	.2955	.2944	.2932	.2921	.2910	.2898	.2887
160.0	.2876	.2865	.2853	.2842	.2831	.2820	.2809	.2798	.2788	.2777
165.0	.2766	.2755	.2744	.2734	.2723	.2713	.2702	.2691	.2681	.2671
170.0	.2660	.2650	.2640	.2629	.2619	.2609	.2599	.2589	.2579	.2569
175.0	.2559	.2549	.2539	.2529	.2519	.2509	.2500	.2490	.2480	.2470
180.0	.2461	.2451	.2442	.2432	.2423	.2413	.2404	.2395	.2385	.2376
185.0	.2367	.2358	.2348	.2339	.2330	.2321	.2312	.2303	.2294	.2285
190.0	.2276	.2268	.2259	.2250	.2241	.2233	.2224	.2215	.2207	.2198
195.0	.2189	.2181	.2172	.2164	.2156	.2147	.2139	.2131	.2122	.2114

PU - 238

HALF-LIFE 89.00 YEARS CALCULATION INTERVAL .5 YEARS

YEARS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
200.0	.2106	.2098	.2089	.2081	.2073	.2065	.2057	.2049	.2041	.2033
205.0	.2025	.2018	.2010	.2002	.1994	.1986	.1979	.1971	.1963	.1956
210.0	.1948	.1940	.1933	.1925	.1918	.1910	.1903	.1896	.1888	.1881
215.0	.1874	.1866	.1859	.1852	.1845	.1837	.1830	.1823	.1816	.1809
220.0	.1802	.1795	.1788	.1781	.1774	.1767	.1760	.1754	.1747	.1740
225.0	.1733	.1726	.1720	.1713	.1706	.1700	.1693	.1687	.1680	.1673
230.0	.1667	.1660	.1654	.1648	.1641	.1635	.1628	.1622	.1616	.1610
235.0	.1603	.1597	.1591	.1585	.1578	.1572	.1566	.1560	.1554	.1548
240.0	.1542	.1536	.1530	.1524	.1518	.1512	.1506	.1501	.1495	.1489
245.0	.1483	.1477	.1472	.1466	.1460	.1455	.1449	.1443	.1438	.1432
250.0	.1426	.1421	.1415	.1410	.1404	.1399	.1394	.1388	.1383	.1377
255.0	.1372	.1367	.1361	.1356	.1351	.1345	.1340	.1335	.1330	.1325
260.0	.1320	.1314	.1309	.1304	.1299	.1294	.1289	.1284	.1279	.1274
265.0	.1269	.1264	.1259	.1254	.1250	.1245	.1240	.1235	.1230	.1225
270.0	.1221	.1216	.1211	.1206	.1202	.1197	.1192	.1188	.1183	.1179
275.0	.1174	.1169	.1165	.1160	.1156	.1151	.1147	.1142	.1138	.1134
280.0	.1129	.1125	.1120	.1116	.1112	.1107	.1103	.1099	.1094	.1090
285.0	.1086	.1082	.1078	.1073	.1069	.1065	.1061	.1057	.1053	.1049
290.0	.1044	.1040	.1036	.1032	.1028	.1024	.1020	.1016	.1012	.1009
295.0	.1005	.1001	.0997	.0993	.0989	.0985	.0981	.0978	.0974	.0970

PU - 241

HALF-LIFE 13.00 YEARS CALCULATION INTERVAL 30.0 DAYS

DAYS	0.0	30.0	60.0	90.0	120.0	150.0	180.0	210.0	240.0	270.0
0.0	1.0000	.9956	.9912	.9869	.9826	.9783	.9740	.9697	.9655	.9613
300.0	.9571	.9529	.9487	.9446	.9404	.9363	.9322	.9282	.9241	.9201
600.0	.9160	.9120	.9080	.9041	.9001	.8962	.8923	.8884	.8845	.8806
900.0	.8768	.8729	.8691	.8653	.8615	.8578	.8540	.8503	.8465	.8428
1200.0	.8392	.8355	.8318	.8282	.8246	.8210	.8174	.8138	.8102	.8067
1500.0	.8032	.7997	.7962	.7927	.7892	.7858	.7823	.7789	.7755	.7721
1800.0	.7687	.7654	.7620	.7587	.7554	.7521	.7488	.7455	.7422	.7390
2100.0	.7358	.7326	.7294	.7262	.7230	.7198	.7167	.7135	.7104	.7073
2400.0	.7042	.7011	.6981	.6950	.6920	.6890	.6859	.6829	.6800	.6770
2700.0	.6740	.6711	.6681	.6652	.6623	.6594	.6565	.6537	.6508	.6480
3000.0	.6451	.6423	.6395	.6367	.6339	.6311	.6284	.6256	.6229	.6202
3300.0	.6175	.6148	.6121	.6094	.6067	.6041	.6014	.5988	.5962	.5936
3600.0	.5910	.5884	.5858	.5833	.5807	.5782	.5756	.5731	.5706	.5681
3900.0	.5656	.5632	.5607	.5583	.5558	.5534	.5510	.5486	.5462	.5438
4200.0	.5414	.5390	.5367	.5343	.5320	.5297	.5273	.5250	.5227	.5204
4500.0	.5182	.5159	.5136	.5114	.5092	.5069	.5047	.5025	.5003	.4981
4800.0	.4959	.4938	.4916	.4895	.4873	.4852	.4831	.4810	.4789	.4768
5100.0	.4747	.4726	.4705	.4685	.4664	.4644	.4624	.4603	.4583	.4563
5400.0	.4543	.4523	.4504	.4484	.4464	.4445	.4425	.4406	.4387	.4368
5700.0	.4348	.4329	.4311	.4292	.4273	.4254	.4236	.4217	.4199	.4180
6000.0	.4162	.4144	.4126	.4108	.4090	.4072	.4054	.4036	.4019	.4001
6300.0	.3984	.3966	.3949	.3931	.3914	.3897	.3880	.3863	.3846	.3829
6600.0	.3813	.3796	.3779	.3763	.3746	.3730	.3714	.3697	.3681	.3665
6900.0	.3649	.3633	.3617	.3602	.3586	.3570	.3554	.3539	.3523	.3508
7200.0	.3493	.3477	.3462	.3447	.3432	.3417	.3402	.3387	.3372	.3358
7500.0	.3343	.3328	.3314	.3299	.3285	.3270	.3256	.3242	.3228	.3214
7800.0	.3200	.3186	.3172	.3158	.3144	.3130	.3117	.3103	.3089	.3076
8100.0	.3062	.3049	.3036	.3022	.3009	.2996	.2983	.2970	.2957	.2944
8400.0	.2931	.2918	.2905	.2893	.2880	.2867	.2855	.2842	.2830	.2818
8700.0	.2805	.2793	.2781	.2769	.2757	.2745	.2733	.2721	.2709	.2697
9000.0	.2685	.2673	.2662	.2650	.2638	.2627	.2615	.2604	.2593	.2581
9300.0	.2570	.2559	.2547	.2536	.2525	.2514	.2503	.2492	.2481	.2470
9600.0	.2460	.2449	.2438	.2428	.2417	.2406	.2396	.2385	.2375	.2365
9900.0	.2354	.2344	.2334	.2323	.2313	.2303	.2293	.2283	.2273	.2263
10200.0	.2253	.2243	.2234	.2224	.2214	.2204	.2195	.2185	.2176	.2166
10500.0	.2157	.2147	.2138	.2128	.2119	.2110	.2101	.2091	.2082	.2073
10800.0	.2064	.2055	.2046	.2037	.2028	.2019	.2011	.2002	.1993	.1984
11100.0	.1976	.1967	.1958	.1950	.1941	.1933	.1924	.1916	.1907	.1899
11400.0	.1891	.1883	.1874	.1866	.1858	.1850	.1842	.1834	.1826	.1818
11700.0	.1810	.1802	.1794	.1786	.1778	.1771	.1763	.1755	.1747	.1740

PU - 241

HALF-LIFE 13.00 YEARS CALCULATION INTERVAL 30.0 DAYS

DAYS	DAYS 0.0	30.0	60.0	90.0	120.0	150.0	180.0	210.0	240.0	270.0
12000.0	.1732	.1725	.1717	.1710	.1702	.1695	.1687	.1680	.1672	.1665
12300.0	.1658	.1651	.1643	.1636	.1629	.1622	.1615	.1608	.1601	.1594
12600.0	.1587	.1580	.1573	.1566	.1559	.1552	.1546	.1539	.1532	.1525
12900.0	.1519	.1512	.1505	.1499	.1492	.1486	.1479	.1473	.1466	.1460
13200.0	.1454	.1447	.1441	.1435	.1428	.1422	.1416	.1410	.1403	.1397
13500.0	.1391	.1385	.1379	.1373	.1367	.1361	.1355	.1349	.1343	.1337
13800.0	.1332	.1326	.1320	.1314	.1308	.1303	.1297	.1291	.1286	.1280
14100.0	.1274	.1269	.1263	.1258	.1252	.1247	.1241	.1236	.1230	.1225
14400.0	.1220	.1214	.1209	.1204	.1199	.1193	.1188	.1183	.1178	.1173
14700.0	.1167	.1162	.1157	.1152	.1147	.1142	.1137	.1132	.1127	.1122
15000.0	.1117	.1112	.1108	.1103	.1098	.1093	.1088	.1084	.1079	.1074
15300.0	.1069	.1065	.1060	.1055	.1051	.1046	.1042	.1037	.1033	.1028
15600.0	.1024	.1019	.1015	.1010	.1006	.1001	.0997	.0993	.0988	.0984

PO - 210

HALF-LIFE 138.40 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	1.0000	.9950	.9900	.9850	.9801	.9752	.9703	.9655	.9607	.9559
10.0	.9511	.9463	.9416	.9369	.9322	.9276	.9229	.9183	.9137	.9092
20.0	.9046	.9001	.8956	.8911	.8867	.8823	.8779	.8735	.8691	.8648
30.0	.8604	.8561	.8519	.8476	.8434	.8392	.8350	.8308	.8266	.8225
40.0	.8184	.8143	.8103	.8062	.8022	.7982	.7942	.7902	.7863	.7823
50.0	.7784	.7745	.7707	.7668	.7630	.7592	.7554	.7516	.7479	.7441
60.0	.7404	.7367	.7330	.7294	.7257	.7221	.7185	.7149	.7113	.7078
70.0	.7042	.7007	.6972	.6937	.6903	.6868	.6834	.6800	.6766	.6732
80.0	.6698	.6665	.6631	.6598	.6565	.6533	.6500	.6467	.6435	.6403
90.0	.6371	.6339	.6308	.6276	.6245	.6213	.6182	.6152	.6121	.6090
100.0	.6060	.6030	.5999	.5969	.5940	.5910	.5880	.5851	.5822	.5793
110.0	.5764	.5735	.5706	.5678	.5649	.5621	.5593	.5565	.5537	.5510
120.0	.5482	.5455	.5428	.5400	.5373	.5347	.5320	.5293	.5267	.5241
130.0	.5214	.5188	.5162	.5137	.5111	.5085	.5060	.5035	.5010	.4984
140.0	.4960	.4935	.4910	.4886	.4861	.4837	.4813	.4789	.4765	.4741
150.0	.4717	.4694	.4670	.4647	.4624	.4601	.4578	.4555	.4532	.4509
160.0	.4487	.4464	.4442	.4420	.4398	.4376	.4354	.4332	.4311	.4289
170.0	.4268	.4246	.4225	.4204	.4183	.4162	.4141	.4121	.4100	.4080
180.0	.4059	.4039	.4019	.3999	.3979	.3959	.3939	.3919	.3900	.3880
190.0	.3861	.3842	.3822	.3803	.3784	.3765	.3747	.3728	.3709	.3691
200.0	.3672	.3654	.3636	.3617	.3599	.3581	.3563	.3546	.3528	.3510
210.0	.3493	.3475	.3458	.3441	.3424	.3406	.3389	.3372	.3356	.3339
220.0	.3322	.3306	.3289	.3273	.3256	.3240	.3224	.3208	.3192	.3176
230.0	.3160	.3144	.3128	.3113	.3097	.3082	.3066	.3051	.3036	.3021
240.0	.3005	.2990	.2975	.2961	.2946	.2931	.2916	.2902	.2887	.2873
250.0	.2859	.2844	.2830	.2816	.2802	.2788	.2774	.2760	.2746	.2733
260.0	.2719	.2705	.2692	.2678	.2665	.2652	.2638	.2625	.2612	.2599
270.0	.2586	.2573	.2560	.2548	.2535	.2522	.2510	.2497	.2485	.2472
280.0	.2460	.2447	.2435	.2423	.2411	.2399	.2387	.2375	.2363	.2351
290.0	.2340	.2328	.2316	.2305	.2293	.2282	.2270	.2259	.2248	.2236
300.0	.2225	.2214	.2203	.2192	.2181	.2170	.2159	.2149	.2138	.2127
310.0	.2117	.2106	.2095	.2085	.2075	.2064	.2054	.2044	.2033	.2023
320.0	.2013	.2003	.1993	.1983	.1973	.1963	.1954	.1944	.1934	.1924
330.0	.1915	.1905	.1896	.1886	.1877	.1867	.1858	.1849	.1840	.1830
340.0	.1821	.1812	.1803	.1794	.1785	.1776	.1767	.1758	.1750	.1741
350.0	.1732	.1724	.1715	.1706	.1698	.1689	.1681	.1673	.1664	.1656
360.0	.1648	.1639	.1631	.1623	.1615	.1607	.1599	.1591	.1583	.1575
370.0	.1567	.1559	.1551	.1544	.1536	.1528	.1521	.1513	.1505	.1498
380.0	.1490	.1483	.1476	.1468	.1461	.1454	.1446	.1439	.1432	.1425
390.0	.1418	.1411	.1404	.1397	.1390	.1383	.1376	.1369	.1362	.1355

PO - 210

HALF-LIFE 138.40 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
					DAYS					
400.0	.1348	.1342	.1335	.1328	.1322	.1315	.1308	.1302	.1295	.1289
410.0	.1282	.1276	.1270	.1263	.1257	.1251	.1245	.1238	.1232	.1226
420.0	.1220	.1214	.1208	.1202	.1196	.1190	.1184	.1178	.1172	.1166
430.0	.1160	.1154	.1149	.1143	.1137	.1131	.1126	.1120	.1115	.1109
440.0	.1103	.1098	.1092	.1087	.1082	.1076	.1071	.1065	.1060	.1055
450.0	.1050	.1044	.1039	.1034	.1029	.1024	.1018	.1013	.1008	.1003
460.0	.0998	.0993	.0988	.0983	.0978	.0974	.0969	.0964	.0959	.0954

PO - 218

HALF-LIFE 3.05 MINUTES CALCULATION INTERVAL 1.0 SECONDS

MINUTES	SECONDS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9962	.9924	.9887	.9849	.9812	.9775	.9738	.9701	.9664	.9628	.9591
.20	.9555	.9519	.9483	.9447	.9411	.9376	.9340	.9305	.9270	.9235	.9200	.9165
.40	.9131	.9096	.9062	.9027	.8993	.8959	.8925	.8892	.8858	.8825	.8791	.8758
.60	.8725	.8692	.8659	.8626	.8594	.8561	.8529	.8497	.8464	.8432	.8401	.8369
.80	.8337	.8306	.8274	.8243	.8212	.8181	.8150	.8119	.8088	.8058	.8027	.7997
1.00	.7967	.7937	.7907	.7877	.7847	.7817	.7788	.7758	.7729	.7700	.7671	.7642
1.20	.7613	.7584	.7555	.7527	.7498	.7470	.7442	.7413	.7385	.7357	.7330	.7302
1.40	.7274	.7247	.7219	.7192	.7165	.7139	.7111	.7084	.7057	.7031	.7004	.6977
1.60	.6951	.6925	.6899	.6873	.6847	.6821	.6795	.6769	.6744	.6718	.6693	.6667
1.80	.6642	.6617	.6592	.6567	.6542	.6518	.6493	.6468	.6444	.6420	.6395	.6371
2.00	.6347	.6323	.6299	.6275	.6252	.6228	.6204	.6181	.6158	.6134	.6111	.6088
2.20	.6065	.6042	.6019	.5996	.5974	.5951	.5929	.5906	.5884	.5862	.5840	.5817
2.40	.5795	.5774	.5752	.5730	.5708	.5687	.5665	.5644	.5622	.5601	.5580	.5559
2.60	.5538	.5517	.5496	.5475	.5455	.5434	.5413	.5393	.5373	.5352	.5332	.5312
2.80	.5292	.5272	.5252	.5232	.5212	.5193	.5173	.5153	.5134	.5114	.5095	.5076
3.00	.5057	.5038	.5018	.5000	.4981	.4962	.4943	.4924	.4906	.4887	.4869	.4850
3.20	.4832	.4814	.4795	.4777	.4759	.4741	.4723	.4705	.4688	.4670	.4652	.4635
3.40	.4617	.4600	.4582	.4565	.4548	.4531	.4513	.4496	.4479	.4462	.4446	.4429
3.60	.4412	.4395	.4379	.4362	.4346	.4329	.4313	.4297	.4280	.4264	.4248	.4232
3.80	.4216	.4200	.4184	.4168	.4153	.4137	.4121	.4106	.4090	.4075	.4059	.4044
4.00	.4029	.4013	.3998	.3983	.3968	.3953	.3938	.3923	.3908	.3894	.3879	.3864
4.20	.3850	.3835	.3821	.3806	.3792	.3777	.3763	.3749	.3735	.3721	.3706	.3692
4.40	.3678	.3665	.3651	.3637	.3623	.3609	.3596	.3582	.3569	.3555	.3542	.3528
4.60	.3515	.3502	.3488	.3475	.3462	.3449	.3436	.3423	.3410	.3397	.3384	.3372
4.80	.3359	.3346	.3333	.3321	.3308	.3296	.3283	.3271	.3259	.3246	.3234	.3222
5.00	.3210	.3197	.3185	.3173	.3161	.3149	.3137	.3126	.3114	.3102	.3090	.3079
5.20	.3067	.3055	.3044	.3032	.3021	.3009	.2998	.2987	.2975	.2964	.2953	.2942
5.40	.2931	.2920	.2908	.2897	.2887	.2876	.2865	.2854	.2843	.2832	.2822	.2811
5.60	.2800	.2790	.2779	.2769	.2758	.2748	.2737	.2727	.2717	.2706	.2696	.2686
5.80	.2676	.2666	.2656	.2646	.2636	.2626	.2616	.2606	.2596	.2586	.2576	.2567
6.00	.2557	.2547	.2538	.2528	.2519	.2509	.2500	.2490	.2481	.2471	.2462	.2453
6.20	.2443	.2434	.2425	.2416	.2407	.2397	.2388	.2379	.2370	.2361	.2353	.2344
6.40	.2335	.2326	.2317	.2308	.2300	.2291	.2282	.2274	.2265	.2256	.2248	.2239
6.60	.2231	.2223	.2214	.2206	.2197	.2189	.2181	.2173	.2164	.2156	.2148	.2140
6.80	.2132	.2124	.2116	.2108	.2100	.2092	.2084	.2076	.2069	.2060	.2053	.2045
7.00	.2037	.2029	.2022	.2014	.2006	.1999	.1991	.1984	.1976	.1969	.1961	.1954
7.20	.1947	.1939	.1932	.1925	.1917	.1910	.1903	.1896	.1888	.1881	.1874	.1867
7.40	.1860	.1853	.1846	.1839	.1832	.1825	.1818	.1811	.1804	.1798	.1791	.1784
7.60	.1777	.1771	.1764	.1757	.1751	.1744	.1737	.1731	.1724	.1718	.1711	.1705
7.80	.1698	.1692	.1686	.1679	.1673	.1666	.1660	.1654	.1648	.1641	.1635	.1629

PO - 218

HALF-LIFE 3.05 MINUTES CALCULATION INTERVAL 1.0 SECONDS

MINUTES	SECONDS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
8.00	.1623	.1617	.1611	.1605	.1598	.1592	.1586	.1580	.1574	.1568	.1563	.1557
8.20	.1551	.1545	.1539	.1533	.1527	.1522	.1516	.1510	.1504	.1499	.1493	.1487
8.40	.1482	.1476	.1471	.1465	.1460	.1454	.1448	.1443	.1438	.1432	.1427	.1421
8.60	.1416	.1411	.1405	.1400	.1395	.1389	.1384	.1379	.1374	.1368	.1363	.1358
8.80	.1353	.1348	.1343	.1338	.1333	.1328	.1323	.1318	.1313	.1308	.1303	.1298
9.00	.1293	.1288	.1283	.1278	.1273	.1269	.1264	.1259	.1254	.1250	.1245	.1240
9.20	.1235	.1231	.1226	.1221	.1217	.1212	.1208	.1203	.1198	.1194	.1189	.1185
9.40	.1180	.1176	.1172	.1167	.1163	.1158	.1154	.1150	.1145	.1141	.1137	.1132
9.60	.1128	.1124	.1119	.1115	.1111	.1107	.1103	.1098	.1094	.1090	.1086	.1082
9.80	.1078	.1074	.1070	.1066	.1062	.1058	.1054	.1050	.1046	.1042	.1038	.1034
10.00	.1030	.1026	.1022	.1018	.1014	.1011	.1007	.1003	.0999	.0995	.0992	.0988

K - 42

HALF-LIFE 12.40 HOURS CALCULATION INTERVAL 5.0 MINUTES

HOURS	MINUTES 0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0
0.00	1.0000	.9953	.9907	.9861	.9815	.9769	.9724	.9679	.9634	.9589	.9544	.9500
1.00	.9456	.9412	.9368	.9325	.9281	.9238	.9195	.9152	.9110	.9068	.9025	.8984
2.00	.8942	.8900	.8859	.8818	.8777	.8736	.8695	.8655	.8615	.8575	.8535	.8495
3.00	.8456	.8416	.8377	.8338	.8299	.8261	.8223	.8184	.8146	.8108	.8071	.8033
4.00	.7996	.7959	.7922	.7886	.7848	.7812	.7775	.7739	.7703	.7668	.7632	.7596
5.00	.7561	.7526	.7491	.7456	.7422	.7387	.7353	.7319	.7285	.7251	.7217	.7183
6.00	.7150	.7117	.7084	.7051	.7018	.6985	.6953	.6921	.6888	.6856	.6825	.6793
7.00	.6761	.6730	.6699	.6667	.6636	.6606	.6575	.6544	.6514	.6484	.6454	.6424
8.00	.6394	.6364	.6334	.6305	.6276	.6247	.6217	.6189	.6160	.6131	.6103	.6074
9.00	.6046	.6018	.5990	.5962	.5934	.5907	.5879	.5852	.5825	.5798	.5771	.5744
10.00	.5717	.5691	.5664	.5638	.5612	.5586	.5560	.5534	.5508	.5483	.5457	.5432
11.00	.5407	.5381	.5356	.5331	.5307	.5282	.5257	.5233	.5209	.5185	.5160	.5136
12.00	.5113	.5089	.5065	.5042	.5018	.4995	.4972	.4949	.4926	.4903	.4880	.4857
13.00	.4835	.4812	.4790	.4767	.4745	.4723	.4701	.4679	.4658	.4636	.4615	.4593
14.00	.4572	.4550	.4529	.4508	.4487	.4466	.4446	.4425	.4404	.4384	.4364	.4343
15.00	.4323	.4303	.4283	.4263	.4243	.4224	.4204	.4184	.4165	.4146	.4126	.4107
16.00	.4088	.4069	.4050	.4031	.4013	.3994	.3975	.3957	.3939	.3920	.3902	.3884
17.00	.3866	.3848	.3830	.3812	.3794	.3777	.3759	.3742	.3724	.3707	.3690	.3673
18.00	.3656	.3639	.3622	.3605	.3588	.3571	.3555	.3538	.3522	.3506	.3489	.3473
19.00	.3457	.3441	.3425	.3409	.3393	.3377	.3362	.3346	.3330	.3315	.3300	.3284
20.00	.3269	.3254	.3239	.3224	.3209	.3194	.3179	.3164	.3149	.3135	.3120	.3106
21.00	.3091	.3077	.3062	.3048	.3034	.3020	.3006	.2992	.2978	.2964	.2950	.2937
22.00	.2923	.2909	.2896	.2883	.2869	.2856	.2843	.2829	.2816	.2803	.2790	.2777
23.00	.2764	.2751	.2739	.2726	.2713	.2700	.2688	.2675	.2663	.2651	.2638	.2626
24.00	.2614	.2602	.2590	.2578	.2566	.2554	.2542	.2530	.2518	.2507	.2495	.2483
25.00	.2472	.2460	.2449	.2437	.2426	.2415	.2404	.2392	.2381	.2370	.2359	.2348
26.00	.2337	.2326	.2316	.2305	.2294	.2283	.2273	.2262	.2252	.2241	.2231	.2221
27.00	.2210	.2200	.2190	.2180	.2169	.2159	.2149	.2139	.2129	.2119	.2110	.2100
28.00	.2090	.2080	.2071	.2061	.2051	.2042	.2032	.2023	.2014	.2004	.1995	.1986
29.00	.1976	.1967	.1958	.1949	.1940	.1931	.1922	.1913	.1904	.1895	.1886	.1878
30.00	.1869	.1860	.1852	.1843	.1834	.1826	.1817	.1809	.1801	.1792	.1784	.1776
31.00	.1767	.1759	.1751	.1743	.1735	.1727	.1719	.1711	.1703	.1695	.1687	.1679
32.00	.1671	.1663	.1656	.1648	.1640	.1633	.1625	.1618	.1610	.1603	.1595	.1588
33.00	.1580	.1573	.1566	.1558	.1551	.1544	.1537	.1530	.1522	.1515	.1508	.1501
34.00	.1494	.1487	.1480	.1474	.1467	.1460	.1453	.1446	.1440	.1433	.1426	.1420
35.00	.1413	.1407	.1400	.1393	.1387	.1381	.1374	.1368	.1361	.1355	.1349	.1342
36.00	.1336	.1330	.1324	.1318	.1312	.1305	.1299	.1293	.1287	.1281	.1275	.1269
37.00	.1264	.1258	.1252	.1246	.1240	.1234	.1229	.1223	.1217	.1212	.1206	.1200
38.00	.1195	.1189	.1184	.1178	.1173	.1167	.1162	.1156	.1151	.1146	.1140	.1135
39.00	.1130	.1125	.1119	.1114	.1109	.1104	.1099	.1094	.1089	.1083	.1078	.1073
40.00	.1068	.1063	.1058	.1054	.1049	.1044	.1039	.1034	.1029	.1025	.1020	.1015
41.00	.1010	.1006	.1001	.0996	.0992	.0987	.0982	.0978	.0973	.0969	.0964	.0960

PR - 144

HALF-LIFE 17.30 MINUTES CALCULATION INTERVAL 10.0 SECONDS

MINUTES	SECONDS 0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0
0.00	1.0000	.9933	.9867	.9801	.9736	.9671	.9607	.9543	.9479	.9416	.9354	.9291
2.00	.9229	.9168	.9107	.9046	.8986	.8926	.8867	.8808	.8749	.8691	.8633	.8576
4.00	.8519	.8462	.8406	.8350	.8294	.8239	.8184	.8130	.8076	.8022	.7968	.7915
6.00	.7863	.7810	.7758	.7707	.7655	.7604	.7554	.7504	.7454	.7404	.7355	.7306
8.00	.7257	.7209	.7161	.7113	.7066	.7019	.6972	.6926	.6880	.6834	.6788	.6743
10.00	.6698	.6654	.6609	.6565	.6522	.6478	.6435	.6392	.6350	.6308	.6266	.6224
12.00	.6182	.6141	.6100	.6060	.6019	.5979	.5940	.5900	.5861	.5822	.5783	.5745
14.00	.5706	.5668	.5631	.5593	.5556	.5519	.5482	.5446	.5409	.5373	.5338	.5302
16.00	.5267	.5232	.5197	.5162	.5128	.5094	.5060	.5026	.4993	.4960	.4927	.4894
18.00	.4861	.4829	.4797	.4765	.4733	.4702	.4670	.4639	.4608	.4578	.4547	.4517
20.00	.4487	.4457	.4427	.4398	.4369	.4339	.4311	.4282	.4253	.4225	.4197	.4169
22.00	.4141	.4114	.4086	.4059	.4032	.4005	.3979	.3952	.3926	.3900	.3874	.3848
24.00	.3822	.3797	.3772	.3747	.3722	.3697	.3672	.3648	.3623	.3599	.3575	.3552
26.00	.3528	.3504	.3481	.3458	.3435	.3412	.3389	.3367	.3344	.3322	.3300	.3278
28.00	.3256	.3235	.3213	.3192	.3170	.3149	.3128	.3108	.3087	.3066	.3046	.3026
30.00	.3005	.2985	.2966	.2946	.2926	.2907	.2887	.2868	.2849	.2830	.2811	.2793
32.00	.2774	.2756	.2737	.2719	.2701	.2683	.2665	.2647	.2630	.2612	.2595	.2577
34.00	.2560	.2543	.2526	.2510	.2493	.2476	.2460	.2443	.2427	.2411	.2395	.2379
36.00	.2363	.2347	.2332	.2316	.2301	.2286	.2270	.2255	.2240	.2225	.2210	.2196
38.00	.2181	.2167	.2152	.2138	.2124	.2109	.2095	.2081	.2068	.2054	.2040	.2027
40.00	.2013	.2000	.1986	.1973	.1960	.194	.1934	.1921	.1908	.1896	.1883	.1871
42.00	.1858	.1846	.1833	.1821	.1809	.1797	.1785	.1773	.1761	.1750	.1738	.1726
44.00	.1715	.1704	.1692	.1681	.1670	.1659	.1648	.1637	.1626	.1615	.1604	.1593
46.00	.1583	.1572	.1562	.1551	.1541	.1531	.1521	.1511	.1500	.1490	.1481	.1471
48.00	.1461	.1451	.1442	.1432	.1422	.1413	.1404	.1394	.1385	.1376	.1367	.1357
50.00	.1348	.1339	.1330	.1322	.1313	.1304	.1295	.1287	.1278	.1270	.1261	.1253
52.00	.1245	.1236	.1228	.1220	.1212	.1204	.1196	.1188	.1180	.1172	.1164	.1156
54.00	.1149	.1141	.1133	.1126	.1118	.1111	.1104	.1096	.1089	.1082	.1074	.1067
56.00	.1060	.1053	.1046	.1039	.1032	.1025	.1018	.1012	.1005	.0998	.0992	.0985

PM - 147

HALF-LIFE 2.50 YEARS CALCULATION INTERVAL 10.0 DAYS

DAYS	0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0
0.0	1.0000	.9924	.9849	.9774	.9700	.9627	.9554	.9482	.9410	.9339
100.0	.9268	.9198	.9128	.9059	.8991	.8923	.8855	.8788	.8722	.8656
200.0	.8590	.8525	.8461	.8396	.8333	.8270	.8207	.8145	.8084	.8022
300.0	.7962	.7901	.7842	.7782	.7723	.7665	.7607	.7549	.7492	.7436
400.0	.7379	.7323	.7268	.7213	.7158	.7104	.7050	.6997	.6944	.6892
500.0	.6839	.6788	.6736	.6685	.6635	.6585	.6535	.6485	.6436	.6387
600.0	.6339	.6291	.6244	.6196	.6149	.6103	.6057	.6011	.5965	.5920
700.0	.5875	.5831	.5787	.5743	.5700	.5656	.5614	.5571	.5529	.5487
800.0	.5446	.5404	.5363	.5323	.5283	.5243	.5203	.5164	.5124	.5086
900.0	.5047	.5009	.4971	.4933	.4896	.4859	.4822	.4786	.4750	.4714
1000.0	.4678	.4643	.4607	.4573	.4538	.4504	.4470	.4436	.4402	.4369
1100.0	.4336	.4303	.4270	.4238	.4206	.4174	.4143	.4111	.4080	.4049
1200.0	.4019	.3988	.3958	.3928	.3898	.3869	.3840	.3810	.3782	.3753
1300.0	.3725	.3696	.3668	.3641	.3613	.3586	.3559	.3532	.3505	.3478
1400.0	.3452	.3426	.3400	.3374	.3349	.3323	.3298	.3273	.3249	.3224
1500.0	.3200	.3175	.3151	.3127	.3104	.3080	.3057	.3034	.3011	.2988
1600.0	.2965	.2943	.2921	.2899	.2877	.2855	.2833	.2812	.2791	.2769
1700.0	.2749	.2728	.2707	.2687	.2666	.2646	.2626	.2606	.2586	.2567
1800.0	.2547	.2528	.2509	.2490	.2471	.2452	.2434	.2415	.2397	.2379
1900.0	.2361	.2343	.2325	.2308	.2290	.2273	.2256	.2239	.2222	.2205
2000.0	.2188	.2172	.2155	.2139	.2123	.2107	.2091	.2075	.2059	.2044
2100.0	.2028	.2013	.1998	.1983	.1967	.1953	.1938	.1923	.1909	.1894
2200.0	.1880	.1866	.1851	.1837	.1824	.1810	.1796	.1782	.1769	.1756
2300.0	.1742	.1729	.1716	.1703	.1690	.1677	.1665	.1652	.1640	.1627
2400.0	.1615	.1603	.1590	.1578	.1566	.1555	.1543	.1531	.1520	.1508
2500.0	.1497	.1485	.1474	.1463	.1452	.1441	.1430	.1419	.1408	.1398
2600.0	.1387	.1377	.1366	.1356	.1346	.1335	.1325	.1315	.1305	.1295
2700.0	.1286	.1276	.1266	.1257	.1247	.1238	.1228	.1219	.1210	.1201
2800.0	.1192	.1183	.1174	.1165	.1156	.1147	.1138	.1130	.1121	.1113
2900.0	.1104	.1096	.1088	.1079	.1071	.1063	.1055	.1047	.1039	.1031
3000.0	.1024	.1016	.1008	.1000	.0993	.0985	.0978	.0971	.0963	.0956

PA - 233

HALF-LIFE 27.40 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
0.00	1.0000	.9936	.9874	.9812	.9750	.9688	.9627	.9566	.9506	.9446	.9387	.9327
3.00	.9269	.9210	.9152	.9094	.9037	.8980	.8924	.8867	.8811	.8756	.8701	.8646
6.00	.9591	.8537	.8483	.8430	.9377	.8324	.8271	.8219	.8167	.8116	.8065	.8014
9.00	.7963	.7913	.7863	.7814	.7764	.7715	.7667	.7618	.7570	.7523	.7475	.7428
12.00	.7381	.7335	.7289	.7243	.7197	.7152	.7106	.7062	.7017	.6973	.6929	.6885
15.00	.6842	.6799	.6756	.6713	.6671	.6629	.6587	.6546	.6504	.6463	.6422	.6382
18.00	.6342	.6302	.6262	.6223	.6183	.6144	.6106	.6067	.6029	.5991	.5953	.5916
21.00	.5878	.5841	.5804	.5769	.5731	.5695	.5659	.5624	.5588	.5553	.5518	.5483
24.00	.5449	.5414	.5380	.5346	.5312	.5279	.5246	.5213	.5180	.5147	.5115	.5082
27.00	.5050	.5019	.4987	.4955	.4924	.4893	.4862	.4832	.4801	.4771	.4741	.4711
30.00	.4681	.4652	.4622	.4593	.4564	.4535	.4507	.4478	.4450	.4422	.4394	.4367
33.00	.4339	.4312	.4285	.4258	.4231	.4204	.4177	.4151	.4125	.4099	.4073	.4047
36.00	.4022	.3997	.3971	.3946	.3921	.3897	.3872	.3848	.3823	.3799	.3775	.3752
39.00	.3728	.3704	.3681	.3658	.3635	.3612	.3589	.3566	.3544	.3522	.3499	.3477
42.00	.3455	.3434	.3412	.3390	.3369	.3348	.3327	.3306	.3285	.3264	.3244	.3223
45.00	.3203	.3183	.3163	.3143	.3123	.3103	.3084	.3064	.3045	.3026	.3007	.2988
48.00	.2969	.2950	.2931	.2913	.2895	.2876	.2858	.2840	.2822	.2804	.2787	.2769
51.00	.2752	.2734	.2717	.2700	.2683	.2666	.2649	.2633	.2616	.2599	.2583	.2567
54.00	.2551	.2535	.2519	.2503	.2487	.2471	.2455	.2440	.2425	.2409	.2394	.2379
57.00	.2364	.2349	.2334	.2320	.2305	.2291	.2276	.2262	.2248	.2233	.2219	.2205
60.00	.2191	.2178	.2164	.2150	.2137	.2123	.2110	.2096	.2083	.2070	.2057	.2044
63.00	.2031	.2018	.2006	.1993	.1980	.1968	.1956	.1943	.1931	.1919	.1907	.1895
66.00	.1883	.1871	.1859	.1847	.1836	.1824	.1813	.1801	.1790	.1778	.1767	.1756
69.00	.1745	.1734	.1723	.1712	.1701	.1691	.1680	.1669	.1659	.1648	.1638	.1628
72.00	.1617	.1607	.1597	.1587	.1577	.1567	.1557	.1547	.1538	.1528	.1518	.1509
75.00	.1499	.1490	.1480	.1471	.1462	.1453	.1443	.1434	.1425	.1416	.1407	.1398
78.00	.1390	.1381	.1372	.1363	.1355	.1346	.1338	.1329	.1321	.1313	.1304	.1296
81.00	.1288	.1280	.1272	.1264	.1256	.1248	.1240	.1232	.1224	.1217	.1209	.1201
84.00	.1194	.1186	.1179	.1171	.1164	.1157	.1149	.1142	.1135	.1128	.1121	.1114
87.00	.1107	.1100	.1093	.1086	.1079	.1072	.1065	.1059	.1052	.1045	.1039	.1032
90.00	.1026	.1019	.1013	.1006	.1000	.0994	.0987	.0981	.0975	.0969	.0963	.0957

PA - 234

HALF-LIFE 1.18 MINUTES CALCULATION INTERVAL 1.0 SECONDS

MINUTES	SECONDS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9902	.9806	.9710	.9615	.9522	.9429	.9337	.9246	.9156	.9067	.8979
.20	.8891	.8804	.8719	.8634	.8550	.8466	.8384	.8302	.8221	.8141	.8062	.7983
.40	.7905	.7828	.7752	.7677	.7602	.7528	.7454	.7382	.7310	.7239	.7168	.7098
.60	.7029	.6961	.6893	.6826	.6759	.6693	.6628	.6564	.6500	.6436	.6374	.6311
.80	.6250	.6189	.6129	.6069	.6010	.5951	.5893	.5836	.5779	.5723	.5667	.5612
1.00	.5557	.5503	.5449	.5396	.5344	.5292	.5240	.5189	.5138	.5088	.5039	.4990
1.20	.4941	.4893	.4845	.4798	.4751	.4705	.4659	.4614	.4569	.4524	.4480	.4437
1.40	.4393	.4351	.4308	.4266	.4225	.4183	.4143	.4102	.4062	.4023	.3984	.3945
1.60	.3906	.3868	.3831	.3793	.3756	.3720	.3683	.3648	.3612	.3577	.3542	.3507
1.80	.3473	.3439	.3406	.3373	.3340	.3307	.3275	.3243	.3212	.3180	.3149	.3119
2.00	.3088	.3058	.3028	.2999	.2970	.2941	.2912	.2884	.2856	.2828	.2800	.2773
2.20	.2746	.2719	.2693	.2666	.2640	.2615	.2589	.2564	.2539	.2514	.2490	.2465
2.40	.2441	.2418	.2394	.2371	.2348	.2325	.2302	.2280	.2257	.2235	.2214	.2192
2.60	.2171	.2150	.2129	.2108	.2087	.2067	.2047	.2027	.2007	.1988	.1968	.1949
2.80	.1930	.1911	.1893	.1874	.1856	.1838	.1820	.1802	.1785	.1767	.1750	.1733
3.00	.1716	.1699	.1683	.1666	.1650	.1634	.1618	.1602	.1587	.1571	.1556	.1541
3.20	.1526	.1511	.1496	.1482	.1467	.1453	.1439	.1425	.1411	.1397	.1383	.1370
3.40	.1357	.1343	.1330	.1317	.1305	.1292	.1279	.1267	.1254	.1242	.1230	.1218
3.60	.1206	.1194	.1183	.1171	.1160	.1149	.1137	.1126	.1115	.1104	.1094	.1083
3.80	.1072	.1062	.1052	.1041	.1031	.1021	.1011	.1001	.0992	.0982	.0972	.0963

RA - 223

HALF-LIFE 11.70 DAYS CALCULATION INTERVAL 2.0 HOURS

DAYS	HOURS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
0.00	1.0000	.9950	.9901	.9852	.9804	.9756	.9708	.9660	.9612	.9565	.9518	.9471
1.00	.9424	.9378	.9332	.9286	.9240	.9194	.9149	.9104	.9059	.9015	.8970	.8926
2.00	.8882	.8838	.8795	.8752	.8708	.8666	.8623	.8580	.8538	.8496	.8454	.8413
3.00	.8371	.8330	.8289	.8248	.8207	.8167	.8127	.8087	.8047	.8007	.7968	.7929
4.00	.7890	.7851	.7812	.7774	.7735	.7697	.7659	.7622	.7584	.7547	.7510	.7473
5.00	.7436	.7399	.7363	.7326	.7290	.7254	.7219	.7183	.7148	.7113	.7078	.7043
6.00	.7008	.6973	.6939	.6905	.6871	.6837	.6803	.6770	.6737	.6703	.6670	.6638
7.00	.6605	.6572	.6540	.6508	.6476	.6444	.6412	.6380	.6349	.6318	.6287	.6256
8.00	.6225	.6194	.6164	.6133	.6103	.6073	.6043	.6013	.5984	.5954	.5925	.5896
9.00	.5867	.5838	.5809	.5781	.5752	.5724	.5696	.5668	.5640	.5612	.5584	.5557
10.00	.5529	.5502	.5475	.5448	.5421	.5394	.5368	.5341	.5315	.5289	.5263	.5237
11.00	.5211	.5186	.5160	.5135	.5109	.5084	.5059	.5034	.5009	.4985	.4960	.4936
12.00	.4911	.4887	.4863	.4839	.4815	.4792	.4768	.4745	.4721	.4698	.4675	.4652
13.00	.4629	.4606	.4583	.4561	.4538	.4516	.4494	.4472	.4450	.4428	.4406	.4384
14.00	.4363	.4341	.4320	.4298	.4277	.4256	.4235	.4214	.4194	.4173	.4152	.4132
15.00	.4112	.4091	.4071	.4051	.4031	.4011	.3992	.3972	.3952	.3933	.3914	.3894
16.00	.3875	.3856	.3837	.3818	.3799	.3781	.3762	.3743	.3725	.3707	.3688	.3670
17.00	.3652	.3634	.3616	.3598	.3581	.3563	.3546	.3528	.3511	.3493	.3476	.3459
18.00	.3442	.3425	.3408	.3391	.3375	.3358	.3342	.3325	.3309	.3292	.3276	.3260
19.00	.3244	.3228	.3212	.3196	.3181	.3165	.3149	.3134	.3118	.3103	.3088	.3073
20.00	.3057	.3042	.3027	.3012	.2998	.2983	.2968	.2954	.2939	.2924	.2910	.2896
21.00	.2881	.2867	.2853	.2839	.2825	.2811	.2797	.2784	.2770	.2756	.2743	.2729
22.00	.2716	.2702	.2689	.2676	.2663	.2649	.2636	.2623	.2611	.2598	.2585	.2572
23.00	.2559	.2547	.2534	.2522	.2509	.2497	.2485	.2473	.2460	.2448	.2436	.2424
24.00	.2412	.2400	.2388	.2377	.2365	.2353	.2342	.2330	.2319	.2307	.2296	.2285
25.00	.2273	.2262	.2251	.2240	.2229	.2218	.2207	.2196	.2185	.2175	.2164	.2153
26.00	.2143	.2132	.2122	.2111	.2101	.2090	.2080	.2070	.2060	.2049	.2039	.2029
27.00	.2019	.2009	.1999	.1990	.1980	.1970	.1960	.1951	.1941	.1932	.1922	.1913
28.00	.1903	.1894	.1884	.1875	.1866	.1857	.1848	.1838	.1829	.1820	.1811	.1803
29.00	.1794	.1785	.1776	.1767	.1759	.1750	.1741	.1733	.1724	.1716	.1707	.1699
30.00	.1690	.1682	.1674	.1666	.1657	.1649	.1641	.1633	.1625	.1617	.1609	.1601
31.00	.1593	.1585	.1578	.1570	.1562	.1554	.1547	.1539	.1531	.1524	.1516	.1509
32.00	.1502	.1494	.1487	.1479	.1472	.1465	.1458	.1450	.1443	.1436	.1429	.1422
33.00	.1415	.1408	.1401	.1394	.1387	.1381	.1374	.1367	.1360	.1354	.1347	.1340
34.00	.1334	.1327	.1321	.1314	.1308	.1301	.1295	.1288	.1282	.1276	.1269	.1263
35.00	.1257	.1251	.1245	.1238	.1232	.1226	.1220	.1214	.1208	.1202	.1196	.1190
36.00	.1185	.1179	.1173	.1167	.1161	.1156	.1150	.1144	.1139	.1133	.1128	.1122
37.00	.1116	.1111	.1105	.1100	.1095	.1089	.1084	.1078	.1073	.1068	.1063	.1057
38.00	.1052	.1047	.1042	.1037	.1032	.1027	.1021	.1016	.1011	.1006	.1001	.0997

787 - 771 O - 65 - 9

RA - 224

HALF-LIFE 3.64 DAYS CALCULATION INTERVAL .5 HOURS

DAYS	HOURS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
0.00	1.0000	.9960	.9920	.9881	.9842	.9803	.9764	.9726	.9687	.9649	.9611	.9572
.25	.9535	.9497	.9459	.9422	.9384	.9347	.9310	.9273	.9237	.9200	.9164	.9127
.50	.9091	.9055	.9019	.8984	.8948	.8913	.8877	.8842	.8807	.8772	.8738	.8703
.75	.8669	.8634	.8600	.8566	.8532	.8498	.8465	.8431	.8398	.8365	.8331	.8298
1.00	.8266	.8233	.8200	.8168	.8135	.8103	.8071	.8039	.8007	.7976	.7944	.7913
1.25	.7881	.7850	.7819	.7788	.7757	.7726	.7696	.7665	.7635	.7605	.7575	.7545
1.50	.7515	.7485	.7455	.7426	.7397	.7367	.7338	.7309	.7280	.7251	.7223	.7194
1.75	.7165	.7137	.7109	.7081	.7053	.7025	.6997	.6969	.6942	.6914	.6887	.6859
2.00	.6832	.6805	.6778	.6751	.6725	.6698	.6672	.6645	.6619	.6593	.6567	.6541
2.25	.6515	.6489	.6463	.6438	.6412	.6387	.6361	.6336	.6311	.6286	.6261	.6236
2.50	.6212	.6187	.6163	.6138	.6114	.6090	.6066	.6042	.6018	.5994	.5970	.5946
2.75	.5923	.5899	.5876	.5853	.5830	.5807	.5784	.5761	.5738	.5715	.5693	.5670
3.00	.5648	.5625	.5603	.5581	.5559	.5537	.5515	.5493	.5471	.5449	.5428	.5406
3.25	.5385	.5364	.5342	.5321	.5300	.5279	.5258	.5237	.5217	.5196	.5176	.5155
3.50	.5135	.5114	.5094	.5074	.5054	.5034	.5014	.4994	.4974	.4954	.4935	.4915
3.75	.4896	.4876	.4857	.4838	.4819	.4800	.4781	.4762	.4743	.4724	.4705	.4687
4.00	.4668	.4650	.4631	.4613	.4595	.4577	.4558	.4540	.4522	.4504	.4487	.4469
4.25	.4451	.4434	.4416	.4399	.4381	.4364	.4346	.4329	.4312	.4295	.4278	.4261
4.50	.4244	.4227	.4211	.4194	.4177	.4161	.4144	.4128	.4112	.4095	.4079	.4063
4.75	.4047	.4031	.4015	.3999	.3983	.3967	.3952	.3936	.3920	.3905	.3889	.3874
5.00	.3859	.3843	.3828	.3813	.3798	.3783	.3768	.3753	.3738	.3723	.3709	.3694
5.25	.3679	.3665	.3650	.3636	.3621	.3607	.3593	.3579	.3564	.3550	.3536	.3522
5.50	.3508	.3494	.3480	.3467	.3453	.3439	.3426	.3412	.3399	.3385	.3372	.3358
5.75	.3345	.3332	.3319	.3306	.3292	.3279	.3266	.3253	.3241	.3228	.3215	.3202
6.00	.3190	.3177	.3164	.3152	.3139	.3127	.3115	.3102	.3090	.3078	.3065	.3053
6.25	.3041	.3029	.3017	.3005	.2993	.2982	.2970	.2958	.2946	.2935	.2923	.2911
6.50	.2900	.2888	.2877	.2866	.2854	.2843	.2832	.2820	.2809	.2798	.2787	.2776
6.75	.2765	.2754	.2743	.2732	.2721	.2711	.2700	.2689	.2679	.2668	.2657	.2647
7.00	.2636	.2626	.2616	.2605	.2595	.2585	.2574	.2564	.2554	.2544	.2534	.2524
7.25	.2514	.2504	.2494	.2484	.2474	.2464	.2455	.2445	.2435	.2426	.2416	.2406
7.50	.2397	.2387	.2378	.2369	.2359	.2350	.2341	.2331	.2322	.2313	.2304	.2295
7.75	.2285	.2276	.2267	.2258	.2249	.2241	.2232	.2223	.2214	.2205	.2197	.2188
8.00	.2179	.2171	.2162	.2153	.2145	.2136	.2128	.2120	.2111	.2103	.2094	.2086
8.25	.2078	.2070	.2061	.2053	.2045	.2037	.2029	.2021	.2013	.2005	.1997	.1989
8.50	.1981	.1973	.1966	.1958	.1950	.1942	.1935	.1927	.1919	.1912	.1904	.1897
8.75	.1889	.1882	.1874	.1867	.1859	.1852	.1845	.1837	.1830	.1823	.1816	.1808
9.00	.1801	.1794	.1787	.1780	.1773	.1766	.1759	.1752	.1745	.1738	.1731	.1724
9.25	.1717	.1711	.1704	.1697	.1690	.1684	.1677	.1670	.1664	.1657	.1651	.1644
9.50	.1638	.1631	.1625	.1618	.1612	.1605	.1599	.1593	.1586	.1580	.1574	.1568
9.75	.1561	.1555	.1549	.1543	.1537	.1531	.1525	.1519	.1513	.1507	.1501	.1495

PA - 224

HALF-LIFE 3.64 DAYS CALCULATION INTERVAL .5 HOURS

DAYS	HOURS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
10.00	.1489	.1483	.1477	.1471	.1465	.1460	.1454	.1448	.1442	.1437	.1431	.1425
10.25	.1420	.1414	.1408	.1403	.1397	.1392	.1386	.1381	.1375	.1370	.1364	.1359
10.50	.1354	.1348	.1343	.1338	.1332	.1327	.1322	.1317	.1311	.1306	.1301	.1296
10.75	.1291	.1286	.1280	.1275	.1270	.1265	.1260	.1255	.1250	.1245	.1240	.1236
11.00	.1231	.1226	.1221	.1216	.1211	.1206	.1202	.1197	.1192	.1187	.1183	.1178
11.25	.1173	.1169	.1164	.1159	.1155	.1150	.1146	.1141	.1137	.1132	.1128	.1123
11.50	.1119	.1114	.1110	.1106	.1101	.1097	.1092	.1088	.1084	.1080	.1075	.1071
11.75	.1067	.1063	.1058	.1054	.1050	.1046	.1042	.1038	.1033	.1029	.1025	.1021
12.00	.1017	.1013	.1009	.1005	.1001	.0997	.0993	.0989	.0985	.0981	.0978	.0974

RA - 225

HALF-LIFE 14.80 DAYS CALCULATION INTERVAL 2.0 HOURS

DAYS	HOURS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
0.00	1.0000	.9961	.9922	.9883	.9845	.9806	.9768	.9730	.9692	.9654	.9617	.9579
1.00	.9542	.9505	.9468	.9431	.9394	.9358	.9321	.9285	.9249	.9213	.9177	.9141
2.00	.9105	.9070	.9035	.8999	.8964	.8929	.8895	.8860	.8825	.8791	.8757	.8723
3.00	.8689	.8655	.8621	.8588	.8554	.8521	.8488	.8455	.8422	.8389	.8356	.8324
4.00	.8291	.8259	.8227	.8195	.8163	.8131	.8099	.8068	.8036	.8005	.7974	.7943
5.00	.7912	.7881	.7850	.7820	.7789	.7759	.7729	.7699	.7669	.7639	.7609	.7579
6.00	.7550	.7520	.7491	.7462	.7433	.7404	.7375	.7346	.7318	.7289	.7261	.7232
7.00	.7204	.7176	.7148	.7120	.7093	.7065	.7038	.7010	.6983	.6956	.6929	.6902
8.00	.6875	.6848	.6821	.6795	.6768	.6742	.6716	.6689	.6663	.6637	.6611	.6586
9.00	.6560	.6535	.6509	.6484	.6458	.6433	.6408	.6383	.6358	.6334	.6309	.6284
10.00	.6260	.6236	.6211	.6187	.6163	.6139	.6115	.6091	.6067	.6044	.6020	.5997
11.00	.5973	.5950	.5927	.5904	.5881	.5858	.5835	.5812	.5790	.5767	.5745	.5722
12.00	.5700	.5678	.5656	.5634	.5612	.5590	.5568	.5546	.5525	.5503	.5482	.5461
13.00	.5439	.5418	.5397	.5376	.5355	.5334	.5313	.5293	.5272	.5252	.5231	.5211
14.00	.5190	.5170	.5150	.5130	.5110	.5090	.5070	.5051	.5031	.5011	.4992	.4972
15.00	.4953	.4934	.4914	.4895	.4876	.4857	.4838	.4819	.4801	.4782	.4763	.4745
16.00	.4726	.4708	.4689	.4671	.4653	.4635	.4617	.4599	.4581	.4563	.4545	.4528
17.00	.4510	.4492	.4475	.4457	.4440	.4423	.4406	.4388	.4371	.4354	.4337	.4320
18.00	.4304	.4287	.4270	.4254	.4237	.4220	.4204	.4188	.4171	.4155	.4139	.4123
19.00	.4107	.4091	.4075	.4059	.4043	.4027	.4012	.3996	.3980	.3965	.3949	.3934
20.00	.3919	.3903	.3888	.3873	.3858	.3843	.3828	.3813	.3798	.3783	.3769	.3754
21.00	.3739	.3725	.3710	.3696	.3682	.3667	.3653	.3639	.3624	.3610	.3596	.3582
22.00	.3568	.3554	.3541	.3527	.3513	.3499	.3486	.3472	.3459	.3445	.3432	.3418
23.00	.3405	.3392	.3379	.3365	.3352	.3339	.3326	.3313	.3300	.3287	.3275	.3262
24.00	.3249	.3237	.3224	.3211	.3199	.3186	.3174	.3162	.3149	.3137	.3125	.3113
25.00	.3101	.3088	.3076	.3064	.3052	.3041	.3029	.3017	.3005	.2993	.2982	.2970
26.00	.2959	.2947	.2936	.2924	.2913	.2901	.2890	.2879	.2868	.2856	.2845	.2834
27.00	.2823	.2812	.2801	.2790	.2780	.2769	.2758	.2747	.2736	.2726	.2715	.2705
28.00	.2694	.2684	.2673	.2663	.2652	.2642	.2632	.2621	.2611	.2601	.2591	.2581
29.00	.2571	.2561	.2551	.2541	.2531	.2521	.2511	.2501	.2492	.2482	.2472	.2463
30.00	.2453	.2444	.2434	.2425	.2415	.2406	.2396	.2387	.2378	.2368	.2359	.2350
31.00	.2341	.2332	.2323	.2314	.2305	.2296	.2287	.2278	.2269	.2260	.2251	.2242
32.00	.2234	.2225	.2216	.2208	.2199	.2191	.2182	.2174	.2165	.2157	.2148	.2140
33.00	.2131	.2123	.2115	.2107	.2098	.2090	.2082	.2074	.2066	.2058	.2050	.2042
34.00	.2034	.2026	.2018	.2010	.2002	.1995	.1987	.1979	.1971	.1964	.1956	.1948
35.00	.1941	.1933	.1926	.1918	.1911	.1903	.1896	.1889	.1881	.1874	.1867	.1859
36.00	.1852	.1845	.1838	.1830	.1823	.1816	.1809	.1802	.1795	.1788	.1781	.1774
37.00	.1767	.1760	.1754	.1747	.1740	.1733	.1726	.1720	.1713	.1706	.1700	.1693
38.00	.1686	.1680	.1673	.1667	.1660	.1654	.1647	.1641	.1635	.1628	.1622	.1616
39.00	.1609	.1603	.1597	.1590	.1584	.1578	.1572	.1566	.1560	.1554	.1548	.1542

RA - 225

HALF-LIFE 14.80 DAYS CALCULATION INTERVAL 2.0 HOURS

	HOURS											
DAYS	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
40.00	.1536	.1530	.1524	.1518	.1512	.1506	.1500	.1494	.1488	.1483	.1477	.1471
41.00	.1465	.1460	.1454	.1448	.1443	.1437	.1431	.1426	.1420	.1415	.1409	.1404
42.00	.1398	.1393	.1387	.1382	.1377	.1371	.1366	.1361	.1355	.1350	.1345	.1339
43.00	.1334	.1329	.1324	.1319	.1314	.1308	.1303	.1298	.1293	.1288	.1283	.1278
44.00	.1273	.1268	.1263	.1258	.1253	.1249	.1244	.1239	.1234	.1229	.1224	.1220
45.00	.1215	.1210	.1205	.1201	.1196	.1191	.1187	.1182	.1178	.1173	.1168	.1164
46.00	.1159	.1155	.1150	.1146	.1141	.1137	.1132	.1128	.1124	.1119	.1115	.1111
47.00	.1106	.1102	.1098	.1093	.1089	.1085	.1081	.1076	.1072	.1068	.1064	.1060
48.00	.1056	.1051	.1047	.1043	.1039	.1035	.1031	.1027	.1023	.1019	.1015	.1011
49.00	.1007	.1003	.0999	.0996	.0992	.0988	.0984	.0980	.0976	.0972	.0969	.0965

RA - 226

HALF-LIFE 1620.00 YEARS CALCULATION INTERVAL 15.0 YEARS

YEARS	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
0.0	1.0000	.9936	.9872	.9809	.9746	.9684	.9622	.9560	.9499	.9438
150.0	.9378	.9318	.9258	.9199	.9140	.9082	.9024	.8966	.8908	.8851
300.0	.8795	.8739	.8683	.8627	.8572	.8517	.8463	.8408	.8355	.8301
450.0	.8248	.8195	.8143	.8091	.8039	.7988	.7937	.7886	.7835	.7785
600.0	.7735	.7686	.7637	.7588	.7539	.7491	.7443	.7395	.7348	.7301
750.0	.7254	.7208	.7162	.7116	.7071	.7025	.6980	.6936	.6891	.6847
900.0	.6803	.6760	.6717	.6674	.6631	.6589	.6546	.6505	.6463	.6422
1050.0	.6380	.6340	.6299	.6259	.6219	.6179	.6139	.6100	.6061	.6022
1200.0	.5984	.5946	.5907	.5870	.5832	.5795	.5758	.5721	.5684	.5648
1350.0	.5612	.5576	.5540	.5505	.5470	.5435	.5400	.5365	.5331	.5297
1500.0	.5263	.5229	.5196	.5163	.5130	.5097	.5064	.5032	.5000	.4968
1650.0	.4936	.4904	.4873	.4842	.4811	.4780	.4749	.4719	.4689	.4659
1800.0	.4629	.4599	.4570	.4541	.4512	.4483	.4454	.4425	.4397	.4369
1950.0	.4341	.4313	.4286	.4258	.4231	.4204	.4177	.4150	.4124	.4097
2100.0	.4071	.4045	.4019	.3994	.3968	.3943	.3917	.3892	.3867	.3843
2250.0	.3818	.3794	.3769	.3745	.3721	.3697	.3674	.3650	.3627	.3604
2400.0	.3581	.3558	.3535	.3512	.3490	.3468	.3445	.3423	.3401	.3380
2550.0	.3358	.3337	.3315	.3294	.3273	.3252	.3231	.3211	.3190	.3170
2700.0	.3149	.3129	.3109	.3089	.3069	.3050	.3030	.3011	.2992	.2973
2850.0	.2953	.2935	.2916	.2897	.2879	.2860	.2842	.2824	.2806	.2788
3000.0	.2770	.2752	.2735	.2717	.2700	.2682	.2665	.2648	.2631	.2614
3150.0	.2598	.2581	.2565	.2548	.2532	.2516	.2500	.2484	.2468	.2452
3300.0	.2436	.2421	.2405	.2390	.2374	.2359	.2344	.2329	.2314	.2299
3450.0	.2285	.2270	.2256	.2241	.2227	.2212	.2198	.2184	.2170	.2156
3600.0	.2143	.2129	.2115	.2102	.2088	.2075	.2062	.2048	.2035	.2022
3750.0	.2009	.1997	.1984	.1971	.1958	.1946	.1933	.1921	.1909	.1897
3900.0	.1884	.1872	.1860	.1848	.1837	.1825	.1813	.1802	.1790	.1779
4050.0	.1767	.1756	.1745	.1734	.1722	.1711	.1700	.1690	.1679	.1668
4200.0	.1657	.1647	.1636	.1626	.1615	.1605	.1595	.1585	.1574	.1564
4350.0	.1554	.1544	.1534	.1525	.1515	.1505	.1496	.1486	.1476	.1467
4500.0	.1458	.1448	.1439	.1430	.1421	.1412	.1403	.1394	.1385	.1376
4650.0	.1367	.1358	.1350	.1341	.1332	.1324	.1315	.1307	.1299	.1290
4800.0	.1282	.1274	.1266	.1258	.1250	.1242	.1234	.1226	.1218	.1210
4950.0	.1202	.1195	.1187	.1179	.1172	.1164	.1157	.1149	.1142	.1135
5100.0	.1128	.1120	.1113	.1106	.1099	.1092	.1085	.1078	.1071	.1064
5250.0	.1057	.1051	.1044	.1037	.1031	.1024	.1017	.1011	.1004	.0998

RA - 228

HALF-LIFE 6.70 YEARS CALCULATION INTERVAL 30.0 DAYS

DAYS	0.0	30.0	60.0	90.0	120.0	150.0	180.0	210.0	240.0	270.0
0.0	1.0000	.9915	.9831	.9748	.9665	.9583	.9502	.9422	.9342	.9263
300.0	.9184	.9107	.9029	.8953	.8877	.8802	.8727	.8654	.8580	.8508
600.0	.8436	.8364	.8293	.8223	.8154	.8084	.8016	.7948	.7881	.7814
900.0	.7748	.7682	.7617	.7553	.7489	.7425	.7363	.7300	.7238	.7177
1200.0	.7116	.7056	.6996	.6937	.6878	.6820	.6762	.6705	.6648	.6592
1500.0	.6536	.6481	.6426	.6372	.6318	.6264	.6211	.6158	.6106	.6055
1800.0	.6003	.5952	.5902	.5852	.5803	.5753	.5705	.5656	.5608	.5561
2100.0	.5514	.5467	.5421	.5375	.5330	.5284	.5240	.5195	.5151	.5108
2400.0	.5064	.5022	.4979	.4937	.4895	.4854	.4812	.4772	.4731	.4691
2700.0	.4652	.4612	.4573	.4534	.4496	.4458	.4420	.4383	.4346	.4309
3000.0	.4272	.4236	.4200	.4165	.4129	.4094	.4060	.4025	.3991	.3958
3300.0	.3924	.3891	.3858	.3825	.3793	.3761	.3729	.3697	.3666	.3635
3600.0	.3604	.3574	.3543	.3513	.3484	.3454	.3425	.3396	.3367	.3339
3900.0	.3310	.3282	.3254	.3227	.3200	.3172	.3146	.3119	.3093	.3066
4200.0	.3040	.3015	.2989	.2964	.2939	.2914	.2889	.2865	.2840	.2816
4500.0	.2793	.2769	.2745	.2722	.2699	.2676	.2654	.2631	.2609	.2587
4800.0	.2565	.2543	.2522	.2500	.2479	.2458	.2437	.2417	.2396	.2376
5100.0	.2356	.2336	.2316	.2296	.2277	.2258	.2239	.2220	.2201	.2182
5400.0	.2164	.2145	.2127	.2109	.2091	.2074	.2056	.2039	.2021	.2004
5700.0	.1987	.1970	.1954	.1937	.1921	.1904	.1888	.1872	.1857	.1841
6000.0	.1825	.1810	.1794	.1779	.1764	.1749	.1734	.1720	.1705	.1691
6300.0	.1676	.1662	.1648	.1634	.1620	.1607	.1593	.1579	.1566	.1553
6600.0	.1540	.1527	.1514	.1501	.1488	.1476	.1463	.1451	.1438	.1426
6900.0	.1414	.1402	.1390	.1379	.1367	.1355	.1344	.1332	.1321	.1310
7200.0	.1299	.1288	.1277	.1266	.1255	.1245	.1234	.1224	.1213	.1203
7500.0	.1193	.1183	.1173	.1163	.1153	.1143	.1134	.1124	.1114	.1105
7800.0	.1096	.1086	.1077	.1068	.1059	.1050	.1041	.1032	.1024	.1015
8100.0	.1006	.0998	.0989	.0981	.0973	.0964	.0956	.0948	.0940	.0932

RN - 220

HALF-LIFE 56.00 SECONDS CALCULATION INTERVAL 1.0 SECONDS

SECONDS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	1.0000	.9876	.9755	.9635	.9516	.9399	.9284	.9170	.9057	.8945
10.0	.8835	.8727	.8619	.8513	.8408	.8305	.8203	.8102	.8002	.7904
20.0	.7807	.7711	.7616	.7522	.7429	.7338	.7248	.7159	.7071	.6984
30.0	.6898	.6813	.6729	.6646	.6564	.6484	.6404	.6325	.6247	.6170
40.0	.6095	.6020	.5946	.5872	.5800	.5729	.5658	.5589	.5520	.5452
50.0	.5385	.5319	.5253	.5189	.5125	.5062	.5000	.4938	.4877	.4817
60.0	.4758	.4699	.4642	.4585	.4528	.4472	.4417	.4363	.4309	.4256
70.0	.4204	.4152	.4101	.4051	.4001	.3952	.3903	.3855	.3808	.3761
80.0	.3714	.3669	.3624	.3579	.3535	.3492	.3449	.3406	.3364	.3323
90.0	.3282	.3242	.3202	.3162	.3123	.3085	.3047	.3010	.2973	.2936
100.0	.2900	.2864	.2829	.2794	.2760	.2726	.2692	.2659	.2626	.2594
110.0	.2562	.2531	.2500	.2469	.2438	.2408	.2379	.2349	.2321	.2292
120.0	.2264	.2236	.2208	.2181	.2154	.2128	.2102	.2076	.2050	.2025
130.0	.2000	.1976	.1951	.1927	.1904	.1880	.1857	.1834	.1812	.1789
140.0	.1767	.1746	.1724	.1703	.1682	.1661	.1641	.1621	.1601	.1581
150.0	.1561	.1542	.1523	.1505	.1486	.1468	.1450	.1432	.1414	.1397
160.0	.1380	.1363	.1346	.1329	.1313	.1297	.1281	.1265	.1250	.1234
170.0	.1219	.1204	.1189	.1174	.1160	.1146	.1132	.1118	.1104	.1090
180.0	.1077	.1064	.1051	.1038	.1025	.1012	.1000	.0988	.0975	.0963

RN - 222

HALF-LIFE 3.82 DAYS CALCULATION INTERVAL .5 HOURS

DAYS	HOURS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
0.00	1.0000	.9962	.9924	.9887	.9849	.9812	.9775	.9738	.9702	.9665	.9629	.9592
.25	.9556	.9520	.9484	.9448	.9413	.9377	.9342	.9306	.9271	.9236	.9201	.9167
.50	.9132	.9098	.9063	.9029	.8995	.8961	.8927	.8894	.8860	.8827	.8793	.8760
.75	.8727	.8694	.8661	.8629	.8596	.8564	.8531	.8499	.8467	.8435	.8403	.8372
1.00	.8340	.8309	.8277	.8246	.8215	.8184	.8153	.8122	.8092	.8061	.8031	.8000
1.25	.7970	.7940	.7910	.7880	.7851	.7821	.7791	.7762	.7733	.7704	.7674	.7646
1.50	.7617	.7588	.7559	.7531	.7502	.7474	.7446	.7418	.7390	.7362	.7334	.7306
1.75	.7279	.7251	.7224	.7197	.7170	.7143	.7116	.7089	.7062	.7035	.7009	.6982
2.00	.6956	.6930	.6904	.6878	.6852	.6826	.6800	.6774	.6749	.6723	.6698	.6673
2.25	.6648	.6622	.6597	.6573	.6548	.6523	.6498	.6474	.6449	.6425	.6401	.6377
2.50	.6353	.6329	.6305	.6281	.6257	.6234	.6210	.6187	.6163	.6140	.6117	.6094
2.75	.6071	.6048	.6025	.6002	.5980	.5957	.5935	.5912	.5890	.5868	.5846	.5824
3.00	.5802	.5780	.5758	.5736	.5715	.5693	.5672	.5650	.5629	.5608	.5586	.5565
3.25	.5544	.5523	.5503	.5482	.5461	.5441	.5420	.5400	.5379	.5359	.5339	.5318
3.50	.5298	.5278	.5259	.5239	.5219	.5199	.5180	.5160	.5141	.5121	.5102	.5083
3.75	.5063	.5044	.5025	.5006	.4987	.4969	.4950	.4931	.4913	.4894	.4876	.4857
4.00	.4839	.4821	.4802	.4784	.4766	.4748	.4730	.4712	.4695	.4677	.4659	.4642
4.25	.4624	.4607	.4589	.4572	.4555	.4538	.4520	.4503	.4486	.4470	.4453	.4436
4.50	.4419	.4402	.4386	.4369	.4353	.4336	.4320	.4304	.4287	.4271	.4255	.4239
4.75	.4223	.4207	.4191	.4175	.4160	.4144	.4128	.4113	.4097	.4082	.4066	.4051
5.00	.4036	.4021	.4005	.3990	.3975	.3960	.3945	.3930	.3916	.3901	.3886	.3871
5.25	.3857	.3842	.3828	.3813	.3799	.3785	.3770	.3756	.3742	.3728	.3714	.3700
5.50	.3686	.3672	.3658	.3644	.3630	.3617	.3603	.3589	.3576	.3562	.3549	.3536
5.75	.3522	.3509	.3496	.3483	.3469	.3456	.3443	.3430	.3417	.3404	.3392	.3379
6.00	.3366	.3353	.3341	.3328	.3315	.3303	.3291	.3278	.3266	.3253	.3241	.3229
6.25	.3217	.3205	.3192	.3180	.3168	.3156	.3145	.3133	.3121	.3109	.3097	.3086
6.50	.3074	.3062	.3051	.3039	.3028	.3016	.3005	.2994	.2982	.2971	.2960	.2949
6.75	.2938	.2927	.2916	.2905	.2894	.2883	.2872	.2861	.2850	.2839	.2829	.2818
7.00	.2807	.2797	.2786	.2776	.2765	.2755	.2744	.2734	.2724	.2713	.2703	.2693
7.25	.2683	.2673	.2663	.2653	.2643	.2633	.2623	.2613	.2603	.2593	.2583	.2574
7.50	.2564	.2554	.2545	.2535	.2525	.2516	.2506	.2497	.2487	.2478	.2469	.2459
7.75	.2450	.2441	.2432	.2422	.2413	.2404	.2395	.2386	.2377	.2368	.2359	.2350
8.00	.2341	.2333	.2324	.2315	.2306	.2298	.2289	.2280	.2272	.2263	.2255	.2246
8.25	.2238	.2229	.2221	.2212	.2204	.2196	.2187	.2179	.2171	.2163	.2155	.2146
8.50	.2138	.2130	.2122	.2114	.2106	.2098	.2090	.2082	.2075	.2067	.2059	.2051
8.75	.2043	.2036	.2028	.2020	.2013	.2005	.1998	.1990	.1983	.1975	.1968	.1960
9.00	.1953	.1945	.1938	.1931	.1923	.1916	.1909	.1902	.1895	.1887	.1880	.1873
9.25	.1866	.1859	.1852	.1845	.1838	.1831	.1824	.1817	.1811	.1804	.1797	.1790
9.50	.1783	.1777	.1770	.1763	.1757	.1750	.1743	.1737	.1730	.1724	.1717	.1711
9.75	.1704	.1698	.1691	.1685	.1679	.1672	.1666	.1660	.1653	.1647	.1641	.1635

RN - 222

HALF-LIFE 3.82 DAYS CALCULATION INTERVAL .5 HOURS

DAYS	HOURS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5
10.00	.1629	.1623	.1616	.1610	.1604	.1598	.1592	.1586	.1580	.1574	.1568	.1562
10.25	.1556	.1551	.1545	.1539	.1533	.1527	.1521	.1516	.1510	.1504	.1499	.1493
10.50	.1487	.1482	.1476	.1471	.1465	.1460	.1454	.1449	.1443	.1438	.1432	.1427
10.75	.1421	.1416	.1411	.1405	.1400	.1395	.1389	.1384	.1379	.1374	.1369	.1363
11.00	.1358	.1353	.1348	.1343	.1338	.1333	.1328	.1323	.1318	.1313	.1308	.1303
11.25	.1298	.1293	.1288	.1283	.1278	.1274	.1269	.1264	.1259	.1255	.1250	.1245
11.50	.1240	.1236	.1231	.1226	.1222	.1217	.1213	.1208	.1204	.1199	.1194	.1190
11.75	.1185	.1181	.1177	.1172	.1168	.1164	.1160	.1154	.1150	.1146	.1141	.1137
12.00	.1133	.1129	.1124	.1120	.1116	.1112	.1107	.1103	.1099	.1095	.1091	.1087
12.25	.1083	.1078	.1074	.1070	.1066	.1062	.1058	.1054	.1050	.1046	.1042	.1038
12.50	.1035	.1031	.1027	.1023	.1019	.1015	.1011	.1008	.1004	.1000	.0996	.0992

RH = 102

HALF-LIFE 206.00 DAYS CALCULATION INTERVAL 2.0 DAYS

DAYS	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0
0.0	1.0000	.9932	.9866	.9800	.9734	.9669	.9604	.9539	.9475	.9412
20.0	.9349	.9286	.9224	.9162	.9100	.9039	.8979	.8918	.8859	.8799
40.0	.8740	.8682	.8623	.8566	.8508	.8451	.8394	.8338	.8282	.8227
60.0	.8171	.8117	.8062	.8008	.7954	.7901	.7848	.7795	.7743	.7691
80.0	.7640	.7588	.7537	.7487	.7437	.7387	.7337	.7288	.7239	.7191
100.0	.7142	.7094	.7047	.7000	.6953	.6906	.6860	.6814	.6768	.6723
120.0	.6677	.6633	.6588	.6544	.6500	.6456	.6413	.6370	.6327	.6285
140.0	.6243	.6201	.6159	.6118	.6077	.6036	.5996	.5956	.5916	.5876
160.0	.5837	.5797	.5758	.5720	.5681	.5643	.5606	.5568	.5531	.5493
180.0	.5457	.5420	.5384	.5348	.5312	.5276	.5241	.5206	.5171	.5136
200.0	.5101	.5067	.5033	.5000	.4966	.4933	.4900	.4867	.4834	.4802
220.0	.4769	.4737	.4706	.4674	.4643	.4612	.4581	.4550	.4519	.4489
240.0	.4459	.4429	.4399	.4370	.4341	.4311	.4283	.4254	.4225	.4197
260.0	.4169	.4141	.4113	.4085	.4058	.4031	.4004	.3977	.3950	.3924
280.0	.3897	.3871	.3845	.3820	.3794	.3769	.3743	.3718	.3693	.3668
300.0	.3644	.3619	.3595	.3571	.3547	.3523	.3500	.3476	.3453	.3430
320.0	.3407	.3384	.3361	.3338	.3316	.3294	.3272	.3250	.3228	.3206
340.0	.3185	.3163	.3142	.3121	.3100	.3079	.3059	.3038	.3018	.2998
360.0	.2978	.2958	.2938	.2918	.2898	.2879	.2860	.2840	.2821	.2803
380.0	.2784	.2765	.2746	.2728	.2710	.2692	.2674	.2656	.2638	.2620
400.0	.2603	.2585	.2568	.2550	.2532	.2516	.2500	.2483	.2466	.2450
420.0	.2433	.2417	.2401	.2384	.2368	.2353	.2337	.2321	.2306	.2290
440.0	.2275	.2259	.2244	.2229	.2214	.2199	.2185	.2170	.2155	.2141
460.0	.2127	.2112	.2098	.2084	.2070	.2056	.2042	.2029	.2015	.2002
480.0	.1988	.1975	.1962	.1948	.1935	.1922	.1910	.1897	.1884	.1871
500.0	.1859	.1846	.1834	.1822	.1809	.1797	.1785	.1773	.1761	.1750
520.0	.1738	.1726	.1715	.1703	.1692	.1680	.1669	.1658	.1647	.1636
540.0	.1625	.1614	.1603	.1592	.1581	.1571	.1560	.1550	.1539	.1529
560.0	.1519	.1509	.1499	.1489	.1479	.1469	.1459	.1449	.1439	.1430
580.0	.1420	.1410	.1401	.1392	.1383	.1373	.1364	.1355	.1346	.1337
600.0	.1328	.1319	.1310	.1301	.1292	.1284	.1275	.1266	.1258	.1250
620.0	.1241	.1233	.1225	.1216	.1208	.1200	.1192	.1184	.1176	.1168
640.0	.1160	.1153	.1145	.1137	.1129	.1122	.1114	.1107	.1099	.1092
660.0	.1085	.1077	.1070	.1063	.1056	.1049	.1042	.1035	.1028	.1021
680.0	.1014	.1007	.1001	.0994	.0987	.0981	.0974	.0967	.0961	.0955

RH = 100

HALF-LIFE 57.00 HOURS CALCULATION INTERVAL .5 HOURS

HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
0.0	1.0000	.9939	.9879	.9819	.9759	.9700	.9641	.9583	.9525	.9467
5.0	.9410	.9353	.9296	.9240	.9185	.9128	.9072	.9017	.8963	.8908
10.0	.8854	.8801	.8747	.8694	.8642	.8589	.8537	.8486	.8434	.8383
15.0	.8332	.8282	.8231	.8182	.8132	.8083	.8034	.7985	.7937	.7888
20.0	.7841	.7793	.7746	.7699	.7652	.7606	.7560	.7514	.7468	.7423
25.0	.7378	.7333	.7289	.7245	.7201	.7157	.7114	.7071	.7028	.6985
30.0	.6943	.6901	.6859	.6817	.6776	.6735	.6694	.6653	.6613	.6573
35.0	.6533	.6494	.6454	.6415	.6376	.6338	.6299	.6261	.6223	.6185
40.0	.6148	.6110	.6073	.6037	.6000	.5964	.5927	.5892	.5856	.5820
45.0	.5785	.5750	.5715	.5680	.5646	.5612	.5578	.5544	.5510	.5477
50.0	.5444	.5411	.5378	.5345	.5313	.5281	.5249	.5217	.5185	.5154
55.0	.5123	.5092	.5061	.5030	.5000	.4969	.4939	.4909	.4879	.4850
60.0	.4820	.4791	.4762	.4733	.4705	.4676	.4648	.4620	.4591	.4564
65.0	.4536	.4508	.4481	.4454	.4427	.4400	.4373	.4347	.4321	.4294
70.0	.4268	.4243	.4217	.4191	.4166	.4141	.4115	.4091	.4066	.4041
75.0	.4017	.3992	.3968	.3944	.3920	.3896	.3873	.3849	.3826	.3803
80.0	.3780	.3757	.3734	.3711	.3689	.3666	.3644	.3622	.3600	.3578
85.0	.3557	.3535	.3514	.3492	.3471	.3450	.3429	.3408	.3388	.3367
90.0	.3347	.3326	.3306	.3286	.3266	.3247	.3227	.3207	.3188	.3169
95.0	.3149	.3130	.3111	.3092	.3074	.3055	.3036	.3018	.3000	.2982
100.0	.2963	.2946	.2928	.2910	.2892	.2875	.2857	.2840	.2823	.2806
105.0	.2789	.2772	.2755	.2738	.2722	.2705	.2689	.2672	.2656	.2640
110.0	.2624	.2608	.2592	.2577	.2561	.2546	.2530	.2515	.2500	.2484
115.0	.2469	.2454	.2439	.2425	.2410	.2395	.2381	.2366	.2352	.2338
120.0	.2324	.2310	.2295	.2282	.2268	.2254	.2240	.2227	.2213	.2200
125.0	.2186	.2173	.2160	.2147	.2134	.2121	.2108	.2095	.2083	.2070
130.0	.2057	.2045	.2033	.2020	.2008	.1996	.1984	.1972	.1960	.1948
135.0	.1936	.1924	.1913	.1901	.1890	.1878	.1867	.1855	.1844	.1833
140.0	.1822	.1811	.1800	.1789	.1778	.1767	.1757	.1746	.1735	.1725
145.0	.1714	.1704	.1694	.1683	.1673	.1663	.1653	.1643	.1633	.1623
150.0	.1613	.1603	.1594	.1584	.1574	.1565	.1555	.1546	.1537	.1527
155.0	.1518	.1509	.1500	.1491	.1481	.1473	.1464	.1455	.1446	.1437
160.0	.1428	.1420	.1411	.1403	.1394	.1386	.1377	.1369	.1361	.1352
165.0	.1344	.1336	.1328	.1320	.1312	.1304	.1296	.1288	.1280	.1273
170.0	.1265	.1257	.1250	.1242	.1234	.1227	.1219	.1212	.1205	.1197
175.0	.1190	.1183	.1176	.1169	.1162	.1155	.1147	.1141	.1134	.1127
180.0	.1120	.1113	.1106	.1100	.1093	.1086	.1080	.1073	.1067	.1060
185.0	.1054	.1047	.1041	.1035	.1028	.1022	.1016	.1010	.1004	.0998

RH = 106

HALF-LIFE 2.20 HOURS CALCULATION INTERVAL 1.0 MINUTES

HOURS	MINUTES 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
.00	1.0000	.9947	.9895	.9843	.9792	.9740	.9689	.9639	.9588	.9538	.9488	.9438
.20	.9389	.9340	.9291	.9242	.9194	.9145	.9098	.9050	.9003	.8955	.8908	.8862
.40	.8815	.8769	.8723	.8678	.8632	.8587	.8542	.8497	.8453	.8408	.8364	.8321
.60	.8277	.8234	.8191	.8148	.8105	.8063	.8020	.7978	.7937	.7895	.7854	.7812
.80	.7772	.7731	.7690	.7650	.7610	.7570	.7530	.7491	.7452	.7413	.7374	.7335
1.00	.7297	.7259	.7221	.7183	.7145	.7108	.7071	.7034	.6997	.6960	.6924	.6887
1.20	.6851	.6815	.6780	.6744	.6709	.6674	.6639	.6604	.6569	.6535	.6501	.6467
1.40	.6433	.6399	.6366	.6332	.6299	.6266	.6233	.6201	.6168	.6136	.6104	.6072
1.60	.6040	.6008	.5977	.5946	.5914	.5883	.5853	.5822	.5791	.5761	.5731	.5701
1.80	.5671	.5641	.5612	.5582	.5553	.5524	.5495	.5466	.5438	.5409	.5381	.5353
2.00	.5325	.5297	.5269	.5241	.5214	.5187	.5160	.5133	.5106	.5079	.5052	.5026
2.20	.5000	.4973	.4947	.4921	.4896	.4870	.4844	.4819	.4794	.4769	.4744	.4719
2.40	.4694	.4670	.4645	.4621	.4597	.4573	.4549	.4525	.4501	.4477	.4454	.4431
2.60	.4407	.4384	.4361	.4339	.4316	.4293	.4271	.4248	.4226	.4204	.4182	.4160
2.80	.4138	.4117	.4095	.4074	.4052	.4031	.4010	.3989	.3968	.3947	.3927	.3906
3.00	.3886	.3865	.3845	.3825	.3805	.3785	.3765	.3745	.3726	.3706	.3687	.3667
3.20	.3648	.3629	.3610	.3591	.3572	.3554	.3535	.3517	.3498	.3480	.3462	.3443
3.40	.3425	.3407	.3390	.3372	.3354	.3337	.3319	.3302	.3284	.3267	.3250	.3233
3.60	.3216	.3199	.3183	.3166	.3149	.3133	.3116	.3100	.3084	.3068	.3052	.3036
3.80	.3020	.3004	.2988	.2973	.2957	.2941	.2926	.2911	.2895	.2880	.2865	.2850
4.00	.2835	.2820	.2806	.2791	.2776	.2762	.2747	.2733	.2719	.2704	.2690	.2676
4.20	.2662	.2648	.2634	.2620	.2607	.2593	.2580	.2566	.2553	.2539	.2526	.2513
4.40	.2500	.2486	.2473	.2460	.2448	.2435	.2422	.2409	.2397	.2384	.2372	.2359
4.60	.2347	.2335	.2322	.2310	.2298	.2286	.2274	.2262	.2250	.2238	.2227	.2215
4.80	.2203	.2192	.2180	.2169	.2158	.2146	.2135	.2124	.2113	.2102	.2091	.2080
5.00	.2069	.2058	.2047	.2037	.2026	.2015	.2005	.1994	.1984	.1973	.1963	.1953
5.20	.1943	.1932	.1922	.1912	.1902	.1892	.1882	.1872	.1863	.1853	.1843	.1833
5.40	.1824	.1814	.1805	.1795	.1786	.1777	.1767	.1758	.1749	.1740	.1731	.1721
5.60	.1712	.1703	.1695	.1686	.1677	.1668	.1659	.1651	.1642	.1633	.1625	.1616
5.80	.1608	.1599	.1591	.1583	.1574	.1566	.1558	.1550	.1542	.1534	.1526	.1518
6.00	.1510	.1502	.1494	.1486	.1478	.1470	.1463	.1455	.1447	.1440	.1432	.1425
6.20	.1417	.1410	.1403	.1395	.1388	.1381	.1373	.1366	.1359	.1352	.1345	.1338
6.40	.1331	.1324	.1317	.1310	.1303	.1296	.1290	.1283	.1276	.1269	.1263	.1256
6.60	.1250	.1243	.1236	.1230	.1224	.1217	.1211	.1204	.1198	.1192	.1186	.1179
6.80	.1173	.1167	.1161	.1155	.1149	.1143	.1137	.1131	.1125	.1119	.1113	.1107
7.00	.1101	.1096	.1090	.1084	.1079	.1073	.1067	.1062	.1056	.1051	.1045	.1040
7.20	.1034	.1029	.1023	.1018	.1013	.1007	.1002	.0997	.0992	.0986	.0981	.0976

RB - 86

HALF-LIFE 18.70 DAYS CALCULATION INTERVAL 2.0 HOURS

DAYS	HOURS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
0.00	1.0000	.9969	.9938	.9907	.9877	.9846	.9816	.9786	.9755	.9725	.9695	.9665
1.00	.9636	.9606	.9576	.9547	.9517	.9488	.9459	.9430	.9400	.9371	.9343	.9314
2.00	.9285	.9256	.9228	.9199	.9171	.9143	.9114	.9086	.9058	.9030	.9003	.8975
3.00	.8947	.8920	.8892	.8865	.8837	.8810	.8783	.8756	.8729	.8702	.8675	.8648
4.00	.8622	.8595	.8568	.8542	.8516	.8489	.8463	.8437	.8411	.8385	.8359	.8333
5.00	.8308	.8282	.8257	.8231	.8206	.8180	.8155	.8130	.8105	.8080	.8055	.8030
6.00	.8005	.7981	.7956	.7932	.7907	.7883	.7858	.7834	.7810	.7786	.7762	.7738
7.00	.7714	.7690	.7667	.7643	.7619	.7596	.7572	.7549	.7526	.7503	.7479	.7456
8.00	.7433	.7410	.7388	.7365	.7342	.7319	.7297	.7274	.7252	.7230	.7207	.7185
9.00	.7163	.7141	.7119	.7097	.7075	.7053	.7031	.7010	.6988	.6967	.6945	.6924
10.00	.6902	.6881	.6860	.6839	.6817	.6796	.6775	.6755	.6734	.6713	.6692	.6672
11.00	.6651	.6631	.6610	.6590	.6569	.6549	.6529	.6509	.6489	.6469	.6449	.6429
12.00	.6409	.6389	.6370	.6350	.6330	.6311	.6291	.6272	.6253	.6233	.6214	.6195
13.00	.6176	.6157	.6138	.6119	.6100	.6081	.6062	.6044	.6025	.6006	.5988	.5969
14.00	.5951	.5933	.5914	.5896	.5878	.5860	.5842	.5824	.5806	.5788	.5770	.5752
15.00	.5734	.5717	.5699	.5682	.5664	.5647	.5629	.5612	.5595	.5577	.5560	.5543
16.00	.5526	.5509	.5492	.5475	.5458	.5441	.5424	.5408	.5391	.5374	.5358	.5341
17.00	.5325	.5308	.5292	.5276	.5259	.5243	.5227	.5211	.5195	.5179	.5163	.5147
18.00	.5131	.5115	.5099	.5084	.5068	.5052	.5037	.5021	.5006	.4990	.4975	.4960
19.00	.4944	.4929	.4914	.4899	.4883	.4868	.4853	.4838	.4824	.4809	.4794	.4779
20.00	.4764	.4750	.4735	.4720	.4706	.4691	.4677	.4662	.4648	.4634	.4619	.4605
21.00	.4591	.4577	.4563	.4549	.4535	.4521	.4507	.4493	.4479	.4465	.4451	.4438
22.00	.4424	.4410	.4397	.4383	.4370	.4356	.4343	.4329	.4316	.4303	.4289	.4276
23.00	.4263	.4250	.4237	.4224	.4210	.4198	.4185	.4172	.4159	.4146	.4133	.4120
24.00	.4108	.4095	.4082	.4070	.4057	.4045	.4032	.4020	.4007	.3995	.3983	.3970
25.00	.3958	.3946	.3934	.3922	.3910	.3898	.3886	.3874	.3862	.3850	.3838	.3826
26.00	.3814	.3802	.3791	.3779	.3767	.3756	.3744	.3733	.3721	.3710	.3698	.3687
27.00	.3675	.3664	.3653	.3641	.3630	.3619	.3608	.3597	.3586	.3575	.3564	.3553
28.00	.3542	.3531	.3520	.3509	.3498	.3487	.3477	.3466	.3455	.3444	.3434	.3423
29.00	.3413	.3402	.3392	.3381	.3371	.3360	.3350	.3340	.3329	.3319	.3309	.3299
30.00	.3289	.3278	.3268	.3258	.3248	.3238	.3228	.3218	.3208	.3198	.3188	.3179
31.00	.3169	.3159	.3149	.3140	.3130	.3120	.3111	.3101	.3091	.3082	.3072	.3063
32.00	.3054	.3044	.3035	.3025	.3016	.3007	.2997	.2988	.2979	.2970	.2961	.2951
33.00	.2942	.2933	.2924	.2915	.2906	.2897	.2888	.2879	.2871	.2862	.2853	.2844
34.00	.2835	.2827	.2818	.2809	.2800	.2792	.2783	.2775	.2766	.2758	.2749	.2741
35.00	.2732	.2724	.2715	.2707	.2699	.2690	.2682	.2674	.2665	.2657	.2649	.2641
36.00	.2633	.2625	.2616	.2608	.2600	.2592	.2584	.2576	.2568	.2560	.2553	.2545
37.00	.2537	.2529	.2521	.2513	.2506	.2498	.2490	.2483	.2475	.2467	.2460	.2452
38.00	.2445	.2437	.2429	.2422	.2415	.2407	.2400	.2392	.2385	.2377	.2370	.2363
39.00	.2356	.2348	.2341	.2334	.2327	.2319	.2312	.2305	.2298	.2291	.2284	.2277

RB - 86

HALF-LIFE 18.70 DAYS CALCULATION INTERVAL 2.0 HOURS

DAYS	HOURS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
40.00	.2270	.2263	.2256	.2249	.2242	.2235	.2228	.2221	.2214	.2208	.2201	.2194
41.00	.2187	.2180	.2174	.2167	.2160	.2154	.2147	.2140	.2134	.2127	.2121	.2114
42.00	.2108	.2101	.2095	.2088	.2082	.2075	.2069	.2063	.2056	.2050	.2043	.2037
43.00	.2031	.2025	.2018	.2012	.2006	.2000	.1994	.1987	.1981	.1975	.1969	.1963
44.00	.1957	.1951	.1945	.1939	.1933	.1927	.1921	.1915	.1909	.1903	.1897	.1892
45.00	.1886	.1880	.1874	.1868	.1863	.1857	.1851	.1845	.1840	.1834	.1828	.1823
46.00	.1817	.1812	.1806	.1800	.1795	.1789	.1784	.1778	.1773	.1767	.1762	.1756
47.00	.1751	.1746	.1740	.1735	.1729	.1724	.1719	.1714	.1708	.1703	.1698	.1692
48.00	.1687	.1682	.1677	.1672	.1667	.1661	.1656	.1651	.1646	.1641	.1636	.1631
49.00	.1626	.1621	.1616	.1611	.1606	.1601	.1596	.1591	.1586	.1581	.1576	.1571
50.00	.1567	.1562	.1557	.1552	.1547	.1543	.1538	.1533	.1528	.1524	.1519	.1514
51.00	.1510	.1505	.1500	.1496	.1491	.1486	.1482	.1477	.1473	.1468	.1464	.1459
52.00	.1455	.1450	.1446	.1441	.1437	.1432	.1428	.1424	.1419	.1415	.1410	.1406
53.00	.1402	.1397	.1393	.1389	.1385	.1380	.1376	.1372	.1367	.1363	.1359	.1355
54.00	.1351	.1347	.1342	.1338	.1334	.1330	.1326	.1322	.1318	.1314	.1310	.1306
55.00	.1302	.1298	.1294	.1290	.1286	.1282	.1278	.1274	.1270	.1266	.1262	.1258
56.00	.1254	.1250	.1246	.1243	.1239	.1235	.1231	.1227	.1224	.1220	.1216	.1212
57.00	.1208	.1205	.1201	.1197	.1194	.1190	.1186	.1183	.1179	.1175	.1172	.1168
58.00	.1165	.1161	.1157	.1154	.1150	.1147	.1143	.1140	.1136	.1133	.1129	.1126
59.00	.1122	.1119	.1115	.1112	.1108	.1105	.1101	.1098	.1095	.1091	.1088	.1085
60.00	.1081	.1078	.1075	.1071	.1068	.1065	.1061	.1058	.1055	.1052	.1048	.1045
61.00	.1042	.1039	.1035	.1032	.1029	.1026	.1023	.1020	.1016	.1013	.1010	.1007
62.00	.1004	.1001	.0998	.0995	.0992	.0989	.0986	.0982	.0979	.0976	.0973	.0970

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HALF-LIFE 40.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
0.00	1.0000	.9956	.9913	.9870	.9828	.9785	.9743	.9701	.9659	.9617	.9576	.9534
3.00	.9493	.9452	.9411	.9370	.9330	.9289	.9249	.9209	.9170	.9130	.9090	.9051
6.00	.9012	.8973	.8934	.8896	.8857	.8819	.8781	.8743	.8705	.8667	.8630	.8593
9.00	.8555	.8518	.8482	.8445	.8408	.8372	.8336	.8300	.8264	.8228	.8193	.8157
12.00	.8122	.8087	.8052	.8017	.7982	.7948	.7914	.7879	.7845	.7811	.7778	.7744
15.00	.7711	.7677	.7644	.7611	.7578	.7545	.7513	.7480	.7448	.7416	.7384	.7352
18.00	.7320	.7288	.7257	.7225	.7194	.7163	.7132	.7101	.7071	.7040	.7010	.6979
21.00	.6949	.6919	.6889	.6859	.6830	.6800	.6771	.6742	.6712	.6683	.6654	.6626
24.00	.6597	.6569	.6540	.6512	.6484	.6456	.6428	.6400	.6372	.6345	.6317	.6290
27.00	.6263	.6236	.6209	.6182	.6155	.6129	.6102	.6076	.6049	.6023	.5997	.5971
30.00	.5946	.5920	.5894	.5869	.5843	.5818	.5793	.5768	.5743	.5718	.5693	.5669
33.00	.5644	.5620	.5596	.5571	.5547	.5523	.5499	.5476	.5452	.5428	.5405	.5382
36.00	.5358	.5335	.5312	.5289	.5266	.5244	.5221	.5198	.5176	.5153	.5131	.5109
39.00	.5087	.5065	.5043	.5021	.5000	.4978	.4956	.4935	.4914	.4892	.4871	.4850
42.00	.4829	.4808	.4788	.4767	.4746	.4726	.4705	.4685	.4665	.4644	.4624	.4604
45.00	.4585	.4565	.4545	.4525	.4506	.4486	.4467	.4448	.4428	.4409	.4390	.4371
48.00	.4352	.4333	.4315	.4296	.4277	.4259	.4241	.4222	.4204	.4186	.4168	.4150
51.00	.4132	.4114	.4096	.4078	.4061	.4043	.4026	.4008	.3991	.3974	.3957	.3939
54.00	.3922	.3905	.3889	.3872	.3855	.3838	.3822	.3805	.3789	.3772	.3756	.3740
57.00	.3724	.3708	.3692	.3676	.3660	.3644	.3628	.3612	.3597	.3581	.3566	.3550
60.00	.3535	.3520	.3505	.3489	.3474	.3459	.3444	.3429	.3415	.3400	.3385	.3371
63.00	.3356	.3341	.3327	.3313	.3298	.3284	.3270	.3256	.3242	.3228	.3214	.3200
66.00	.3186	.3172	.3158	.3145	.3131	.3118	.3104	.3091	.3077	.3064	.3051	.3038
69.00	.3024	.3011	.2998	.2985	.2973	.2960	.2947	.2934	.2921	.2909	.2896	.2884
72.00	.2871	.2859	.2846	.2834	.2822	.2810	.2798	.2785	.2773	.2761	.2749	.2738
75.00	.2726	.2714	.2702	.2691	.2679	.2667	.2656	.2644	.2633	.2622	.2610	.2599
78.00	.2588	.2576	.2565	.2554	.2543	.2532	.2521	.2510	.2500	.2489	.2478	.2467
81.00	.2457	.2446	.2435	.2425	.2414	.2404	.2394	.2383	.2373	.2363	.2352	.2342
84.00	.2332	.2322	.2312	.2302	.2292	.2282	.2272	.2262	.2253	.2243	.2233	.2224
87.00	.2214	.2204	.2195	.2185	.2176	.2166	.2157	.2148	.2138	.2129	.2120	.2111
90.00	.2102	.2093	.2084	.2075	.2066	.2057	.2048	.2039	.2030	.2021	.2013	.2004
93.00	.1995	.1987	.1978	.1969	.1961	.1952	.1944	.1936	.1927	.1919	.1911	.1902
96.00	.1894	.1886	.1878	.1870	.1862	.1854	.1846	.1838	.1830	.1822	.1814	.1806
99.00	.1798	.1790	.1783	.1775	.1767	.1760	.1752	.1744	.1737	.1729	.1722	.1714
102.00	.1707	.1700	.1692	.1685	.1678	.1670	.1663	.1656	.1649	.1642	.1635	.1628
105.00	.1621	.1614	.1607	.1600	.1593	.1586	.1579	.1572	.1565	.1559	.1552	.1545
108.00	.1538	.1532	.1525	.1519	.1512	.1505	.1499	.1492	.1486	.1480	.1473	.1467
111.00	.1460	.1454	.1448	.1442	.1435	.1429	.1423	.1417	.1411	.1405	.1399	.1392
114.00	.1386	.1380	.1374	.1369	.1363	.1357	.1351	.1345	.1339	.1333	.1328	.1322
117.00	.1316	.1311	.1305	.1299	.1294	.1288	.1282	.1277	.1271	.1266	.1260	.1255
120.00	.1250	.1244	.1239	.1233	.1228	.1223	.1217	.1212	.1207	.1202	.1197	.1191
123.00	.1186	.1181	.1176	.1171	.1166	.1161	.1156	.1151	.1146	.1141	.1136	.1131
126.00	.1126	.1121	.1116	.1112	.1107	.1102	.1097	.1092	.1088	.1083	.1078	.1074
129.00	.1069	.1064	.1060	.1055	.1051	.1046	.1042	.1037	.1033	.1028	.1024	.1019
132.00	.1015	.1010	.1006	.1002	.0997	.0993	.0989	.0984	.0980	.0976	.0972	.0968

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HALF-LIFE 40.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
135.00	.0963	.0959	.0955	.0951	.0947	.0943	.0939	.0935	.0931	.0927	.0923	.0919
138.00	.0915	.0911	.0907	.0903	.0899	.0895	.0891	.0887	.0883	.0880	.0876	.0872
141.00	.0868	.0864	.0861	.0857	.0853	.0850	.0846	.0842	.0839	.0835	.0831	.0828
144.00	.0824	.0821	.0817	.0814	.0810	.0807	.0803	.0800	.0796	.0793	.0789	.0786
147.00	.0782	.0779	.0776	.0772	.0769	.0766	.0762	.0759	.0756	.0752	.0749	.0746
150.00	.0743	.0740	.0736	.0733	.0730	.0727	.0724	.0721	.0717	.0714	.0711	.0708
153.00	.0705	.0702	.0699	.0696	.0693	.0690	.0687	.0684	.0681	.0678	.0675	.0672
156.00	.0669	.0666	.0664	.0661	.0658	.0655	.0652	.0649	.0647	.0644	.0641	.0638
159.00	.0635	.0633	.0630	.0627	.0625	.0622	.0619	.0616	.0614	.0611	.0608	.0606
162.00	.0603	.0601	.0598	.0595	.0593	.0590	.0588	.0585	.0583	.0580	.0578	.0575
165.00	.0573	.0570	.0568	.0565	.0563	.0560	.0558	.0556	.0553	.0551	.0548	.0546
168.00	.0544	.0541	.0539	.0537	.0534	.0532	.0530	.0527	.0525	.0523	.0521	.0518
171.00	.0516	.0514	.0512	.0509	.0507	.0505	.0503	.0501	.0498	.0496	.0494	.0492
174.00	.0490	.0488	.0486	.0484	.0481	.0479	.0477	.0475	.0473	.0471	.0469	.0467
177.00	.0465	.0463	.0461	.0459	.0457	.0455	.0453	.0451	.0449	.0447	.0445	.0443
180.00	.0441	.0440	.0438	.0436	.0434	.0432	.0430	.0428	.0426	.0425	.0423	.0421
183.00	.0419	.0417	.0415	.0414	.0412	.0410	.0408	.0407	.0405	.0403	.0401	.0400
186.00	.0398	.0396	.0394	.0393	.0391	.0389	.0388	.0386	.0384	.0383	.0381	.0379
189.00	.0378	.0376	.0374	.0373	.0371	.0370	.0368	.0366	.0365	.0363	.0362	.0360
192.00	.0358	.0357	.0355	.0354	.0352	.0351	.0349	.0348	.0346	.0345	.0343	.0342
195.00	.0340	.0339	.0337	.0336	.0334	.0333	.0332	.0330	.0329	.0327	.0326	.0324
198.00	.0323	.0322	.0320	.0319	.0317	.0316	.0315	.0313	.0312	.0311	.0309	.0308
201.00	.0307	.0305	.0304	.0303	.0301	.0300	.0299	.0297	.0296	.0295	.0294	.0292
204.00	.0291	.0290	.0289	.0287	.0286	.0285	.0284	.0282	.0281	.0280	.0279	.0278
207.00	.0276	.0275	.0274	.0273	.0272	.0270	.0269	.0268	.0267	.0266	.0265	.0263
210.00	.0262	.0261	.0260	.0259	.0258	.0257	.0256	.0254	.0253	.0252	.0251	.0250
213.00	.0249	.0248	.0247	.0246	.0245	.0244	.0243	.0242	.0240	.0239	.0238	.0237
216.00	.0236	.0235	.0234	.0233	.0232	.0231	.0230	.0229	.0228	.0227	.0226	.0225
219.00	.0224	.0223	.0222	.0221	.0220	.0220	.0219	.0218	.0217	.0216	.0215	.0214
222.00	.0213	.0212	.0211	.0210	.0209	.0208	.0207	.0207	.0206	.0205	.0204	.0203
225.00	.0202	.0201	.0200	.0200	.0199	.0198	.0197	.0196	.0195	.0194	.0194	.0193
228.00	.0192	.0191	.0190	.0189	.0189	.0188	.0187	.0186	.0185	.0185	.0184	.0183
231.00	.0182	.0181	.0181	.0180	.0179	.0178	.0177	.0177	.0176	.0175	.0174	.0174
234.00	.0173	.0172	.0171	.0171	.0170	.0169	.0168	.0168	.0167	.0166	.0166	.0165
237.00	.0164	.0163	.0163	.0162	.0161	.0161	.0160	.0159	.0158	.0158	.0157	.0156
240.00	.0156	.0155	.0154	.0154	.0153	.0152	.0152	.0151	.0150	.0150	.0149	.0148
243.00	.0148	.0147	.0147	.0146	.0145	.0145	.0144	.0143	.0143	.0142	.0142	.0141
246.00	.0140	.0140	.0139	.0139	.0138	.0137	.0137	.0136	.0136	.0135	.0134	.0134
249.00	.0133	.0133	.0132	.0131	.0131	.0130	.0130	.0129	.0129	.0128	.0128	.0127
252.00	.0126	.0126	.0125	.0125	.0124	.0124	.0123	.0123	.0122	.0122	.0121	.0121
255.00	.0120	.0119	.0119	.0118	.0118	.0117	.0117	.0116	.0116	.0115	.0115	.0114
258.00	.0114	.0113	.0113	.0112	.0112	.0111	.0111	.0110	.0110	.0110	.0109	.0109
261.00	.0108	.0108	.0107	.0107	.0106	.0106	.0105	.0105	.0104	.0104	.0103	.0103
264.00	.0103	.0102	.0102	.0101	.0101	.0100	.0100	.0100	.0099	.0099	.0098	.0098

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HALF-LIFE .0445 HOURS CALCULATION INTERVAL 1.0 MINUTES

HOURS	MINUTES 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9974	.9948	.9922	.9896	.9871	.9845	.9819	.9794	.9769	.9743	.9718
.20	.9693	.9668	.9643	.9618	.9593	.9568	.9543	.9518	.9494	.9469	.9444	.9420
.40	.9395	.9371	.9347	.9323	.9298	.9274	.9250	.9226	.9202	.9178	.9155	.9131
.60	.9107	.9084	.9060	.9037	.9013	.8990	.8966	.8943	.8920	.8897	.8874	.8851
.80	.8828	.8805	.8782	.8759	.8737	.8714	.8691	.8669	.8646	.8624	.8602	.8579
1.00	.8557	.8535	.8513	.8491	.8469	.8447	.8425	.8403	.8381	.8359	.8338	.8316
1.20	.8295	.8273	.8252	.8230	.8209	.8188	.8166	.8145	.8124	.8103	.8082	.8061
1.40	.8040	.8019	.7999	.7978	.7957	.7937	.7916	.7895	.7875	.7855	.7834	.7814
1.60	.7794	.7773	.7753	.7733	.7713	.7693	.7673	.7653	.7633	.7614	.7594	.7574
1.80	.7555	.7535	.7515	.7496	.7476	.7457	.7438	.7418	.7399	.7380	.7361	.7342
2.00	.7323	.7304	.7285	.7266	.7247	.7228	.7210	.7191	.7172	.7154	.7135	.7117
2.20	.7098	.7080	.7061	.7043	.7025	.7007	.6988	.6970	.6952	.6934	.6916	.6898
2.40	.6880	.6863	.6845	.6827	.6809	.6792	.6774	.6757	.6739	.6722	.6704	.6687
2.60	.6669	.6652	.6635	.6618	.6600	.6583	.6566	.6549	.6532	.6515	.6498	.6482
2.80	.6465	.6448	.6431	.6415	.6398	.6381	.6365	.6348	.6332	.6315	.6299	.6283
3.00	.6266	.6250	.6234	.6218	.6202	.6186	.6170	.6154	.6138	.6122	.6106	.6090
3.20	.6074	.6059	.6043	.6027	.6012	.5996	.5980	.5965	.5949	.5934	.5919	.5903
3.40	.5888	.5873	.5857	.5842	.5827	.5812	.5797	.5782	.5767	.5752	.5737	.5722
3.60	.5707	.5693	.5678	.5663	.5648	.5634	.5619	.5605	.5590	.5576	.5561	.5547
3.80	.5532	.5518	.5504	.5489	.5475	.5461	.5447	.5433	.5419	.5404	.5390	.5376
4.00	.5363	.5349	.5335	.5321	.5307	.5293	.5280	.5266	.5252	.5239	.5225	.5212
4.20	.5198	.5185	.5171	.5158	.5144	.5131	.5118	.5104	.5091	.5078	.5065	.5052
4.40	.5039	.5026	.5013	.5000	.4987	.4974	.4961	.4948	.4935	.4922	.4909	.4897
4.60	.4884	.4871	.4859	.4846	.4834	.4821	.4809	.4796	.4784	.4771	.4759	.4747
4.80	.4734	.4722	.4710	.4697	.4685	.4673	.4661	.4649	.4637	.4625	.4613	.4601
5.00	.4589	.4577	.4565	.4553	.4542	.4530	.4518	.4506	.4495	.4483	.4471	.4460
5.20	.4448	.4437	.4425	.4414	.4402	.4391	.4379	.4368	.4357	.4345	.4334	.4323
5.40	.4312	.4301	.4289	.4278	.4267	.4256	.4245	.4234	.4223	.4212	.4201	.4190
5.60	.4180	.4169	.4158	.4147	.4136	.4126	.4115	.4104	.4094	.4083	.4072	.4062
5.80	.4051	.4041	.4030	.4020	.4009	.3999	.3989	.3978	.3968	.3958	.3947	.3937
6.00	.3927	.3917	.3907	.3897	.3886	.3876	.3866	.3856	.3846	.3836	.3826	.3816
6.20	.3807	.3797	.3787	.3777	.3767	.3757	.3748	.3738	.3728	.3719	.3709	.3699
6.40	.3690	.3680	.3671	.3661	.3652	.3642	.3633	.3623	.3614	.3605	.3595	.3586
6.60	.3577	.3567	.3558	.3549	.3540	.3530	.3521	.3512	.3503	.3494	.3485	.3476
6.80	.3467	.3458	.3449	.3440	.3431	.3422	.3413	.3404	.3396	.3387	.3378	.3369
7.00	.3361	.3352	.3343	.3334	.3326	.3317	.3309	.3300	.3291	.3283	.3274	.3266
7.20	.3257	.3249	.3241	.3232	.3224	.3215	.3207	.3199	.3190	.3182	.3174	.3166
7.40	.3158	.3149	.3141	.3133	.3125	.3117	.3109	.3101	.3093	.3085	.3077	.3069
7.60	.3061	.3053	.3045	.3037	.3029	.3021	.3013	.3006	.2998	.2990	.2982	.2974
7.80	.2967	.2959	.2951	.2944	.2936	.2928	.2921	.2913	.2906	.2898	.2891	.2883

RU - 109

HALF-LIFE 4.45 HOURS CALCULATION INTERVAL 1.0 MINUTES

HOURS	MINUTES 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
8.00	.2876	.2868	.2861	.2853	.2846	.2839	.2831	.2824	.2817	.2809	.2802	.2795
8.20	.2788	.2780	.2773	.2766	.2759	.2752	.2744	.2737	.2730	.2723	.2716	.2709
8.40	.2702	.2695	.2688	.2681	.2674	.2667	.2660	.2653	.2646	.2640	.2633	.2626
8.60	.2619	.2612	.2606	.2599	.2592	.2585	.2579	.2572	.2565	.2559	.2552	.2545
8.80	.2539	.2532	.2526	.2519	.2513	.2506	.2500	.2493	.2487	.2480	.2474	.2467
9.00	.2461	.2454	.2448	.2442	.2435	.2429	.2423	.2417	.2410	.2404	.2398	.2392
9.20	.2385	.2379	.2373	.2367	.2361	.2355	.2349	.2342	.2336	.2330	.2324	.2318
9.40	.2312	.2306	.2300	.2294	.2288	.2282	.2276	.2271	.2265	.2259	.2253	.2247
9.60	.2241	.2235	.2230	.2224	.2218	.2212	.2207	.2201	.2195	.2189	.2184	.2178
9.80	.2173	.2167	.2161	.2156	.2150	.2144	.2139	.2133	.2128	.2122	.2117	.2111
10.00	.2106	.2100	.2095	.2090	.2084	.2079	.2073	.2068	.2063	.2057	.2052	.2047
10.20	.2041	.2036	.2031	.2025	.2020	.2015	.2010	.2004	.1999	.1994	.1989	.1984
10.40	.1979	.1973	.1968	.1963	.1958	.1953	.1948	.1943	.1938	.1933	.1928	.1923
10.60	.1918	.1913	.1908	.1903	.1898	.1893	.1888	.1883	.1878	.1874	.1869	.1864
10.80	.1859	.1854	.1849	.1845	.1840	.1835	.1830	.1826	.1821	.1816	.1811	.1807
11.00	.1802	.1797	.1793	.1788	.1783	.1779	.1774	.1770	.1765	.1760	.1756	.1751
11.20	.1747	.1742	.1738	.1733	.1729	.1724	.1720	.1715	.1711	.1706	.1702	.1698
11.40	.1693	.1689	.1684	.1680	.1676	.1671	.1667	.1663	.1658	.1654	.1650	.1645
11.60	.1641	.1637	.1633	.1628	.1624	.1620	.1616	.1612	.1607	.1603	.1599	.1595
11.80	.1591	.1587	.1583	.1579	.1574	.1570	.1566	.1562	.1558	.1554	.1550	.1546
12.00	.1542	.1538	.1534	.1530	.1526	.1522	.1518	.1514	.1510	.1506	.1503	.1499
12.20	.1495	.1491	.1487	.1483	.1479	.1475	.1472	.1468	.1464	.1460	.1456	.1453
12.40	.1449	.1445	.1441	.1438	.1434	.1430	.1426	.1423	.1419	.1415	.1412	.1408
12.60	.1404	.1401	.1397	.1394	.1390	.1386	.1383	.1379	.1376	.1372	.1368	.1365
12.80	.1361	.1358	.1354	.1351	.1347	.1344	.1340	.1337	.1333	.1330	.1326	.1323
13.00	.1320	.1316	.1313	.1309	.1306	.1303	.1299	.1296	.1292	.1289	.1286	.1282
13.20	.1279	.1276	.1272	.1269	.1266	.1263	.1259	.1256	.1253	.1250	.1246	.1243
13.40	.1240	.1237	.1233	.1230	.1227	.1224	.1221	.1218	.1214	.1211	.1208	.1205
13.60	.1202	.1199	.1196	.1192	.1189	.1186	.1183	.1180	.1177	.1174	.1171	.1168
13.80	.1165	.1162	.1159	.1156	.1153	.1150	.1147	.1144	.1141	.1138	.1135	.1132
14.00	.1129	.1126	.1123	.1120	.1118	.1115	.1112	.1109	.1106	.1103	.1100	.1097
14.20	.1095	.1092	.1089	.1086	.1083	.1080	.1078	.1075	.1072	.1069	.1066	.1064
14.40	.1061	.1058	.1055	.1053	.1050	.1047	.1045	.1042	.1039	.1036	.1034	.1031
14.60	.1028	.1026	.1023	.1020	.1018	.1015	.1012	.1010	.1007	.1005	.1002	.0999

RU - 106

HALF-LIFE 1.00 YEARS CALCULATION INTERVAL 2.0 DAYS

DAYS	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0
0.0	1.0000	.9962	.9924	.9886	.9849	.9811	.9774	.9737	.9700	.9663
20.0	.9627	.9590	.9554	.9518	.9482	.9446	.9410	.9374	.9339	.9303
40.0	.9268	.9233	.9198	.9163	.9128	.9094	.9059	.9025	.8991	.8957
60.0	.8923	.8889	.8855	.8822	.8788	.8755	.8722	.8688	.8656	.8623
80.0	.8590	.8557	.8525	.8493	.8461	.8428	.8396	.8365	.8333	.8301
100.0	.8270	.8239	.8207	.8176	.8145	.8114	.8084	.8053	.8022	.7992
120.0	.7962	.7931	.7901	.7871	.7842	.7812	.7782	.7753	.7723	.7694
140.0	.7665	.7636	.7607	.7578	.7549	.7521	.7492	.7464	.7436	.7407
160.0	.7379	.7351	.7323	.7296	.7268	.7240	.7213	.7186	.7158	.7131
180.0	.7104	.7077	.7050	.7024	.6997	.6971	.6944	.6918	.6892	.6865
200.0	.6839	.6814	.6788	.6762	.6736	.6711	.6685	.6660	.6635	.6610
220.0	.6585	.6560	.6535	.6510	.6485	.6461	.6436	.6412	.6387	.6363
240.0	.6339	.6315	.6291	.6267	.6244	.6220	.6196	.6173	.6149	.6126
260.0	.6103	.6080	.6057	.6034	.6011	.5988	.5965	.5943	.5920	.5898
280.0	.5875	.5853	.5831	.5809	.5787	.5765	.5743	.5721	.5700	.5678
300.0	.5656	.5635	.5614	.5592	.5571	.5550	.5529	.5508	.5487	.5466
320.0	.5446	.5425	.5404	.5384	.5363	.5343	.5323	.5303	.5283	.5263
340.0	.5243	.5223	.5203	.5183	.5164	.5144	.5124	.5105	.5086	.5066
360.0	.5047	.5028	.5009	.4990	.4971	.4952	.4933	.4915	.4896	.4878
380.0	.4859	.4841	.4822	.4804	.4786	.4768	.4750	.4732	.4714	.4696
400.0	.4678	.4660	.4643	.4625	.4607	.4590	.4573	.4555	.4538	.4521
420.0	.4504	.4487	.4470	.4453	.4436	.4419	.4402	.4385	.4369	.4352
440.0	.4336	.4319	.4303	.4287	.4270	.4254	.4238	.4222	.4206	.4190
460.0	.4174	.4158	.4143	.4127	.4111	.4096	.4080	.4065	.4049	.4034
480.0	.4019	.4003	.3988	.3973	.3958	.3943	.3928	.3913	.3898	.3884
500.0	.3869	.3854	.3840	.3825	.3810	.3796	.3782	.3767	.3753	.3739
520.0	.3725	.3710	.3696	.3682	.3668	.3655	.3641	.3627	.3613	.3599
540.0	.3586	.3572	.3559	.3545	.3532	.3518	.3505	.3492	.3478	.3465
560.0	.3452	.3439	.3426	.3413	.3400	.3387	.3374	.3362	.3349	.3336
580.0	.3323	.3311	.3298	.3286	.3273	.3261	.3249	.3236	.3224	.3212
600.0	.3200	.3187	.3175	.3163	.3151	.3139	.3127	.3116	.3104	.3092
620.0	.3080	.3069	.3057	.3045	.3034	.3022	.3011	.2999	.2988	.2977
640.0	.2965	.2954	.2943	.2932	.2921	.2910	.2899	.2888	.2877	.2866
660.0	.2855	.2844	.2833	.2823	.2812	.2801	.2791	.2780	.2769	.2759
680.0	.2749	.2738	.2728	.2717	.2707	.2697	.2687	.2676	.2666	.2656
700.0	.2646	.2636	.2626	.2616	.2606	.2596	.2586	.2577	.2567	.2557
720.0	.2547	.2538	.2528	.2519	.2509	.2500	.2490	.2481	.2471	.2462
740.0	.2452	.2443	.2434	.2425	.2416	.2406	.2397	.2388	.2379	.2370
760.0	.2361	.2352	.2343	.2334	.2325	.2317	.2308	.2299	.2290	.2282
780.0	.2273	.2264	.2256	.2247	.2239	.2230	.2222	.2213	.2205	.2197

RU - 106

HALF-LIFE 1.00 YEARS CALCULATION INTERVAL 2.0 DAYS

DAYS	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0
800.0	.2188	.2180	.2172	.2164	.2155	.2147	.2139	.2131	.2123	.2115
820.0	.2107	.2099	.2091	.2083	.2075	.2067	.2059	.2051	.2044	.2036
840.0	.2028	.2021	.2013	.2005	.1998	.1990	.1983	.1975	.1969	.1960
860.0	.1953	.1945	.1938	.1930	.1923	.1916	.1909	.1901	.1894	.1887
880.0	.1880	.1873	.1866	.1859	.1851	.1844	.1837	.1830	.1824	.1817
900.0	.1810	.1803	.1796	.1789	.1782	.1776	.1769	.1762	.1756	.1749
920.0	.1742	.1736	.1729	.1723	.1716	.1710	.1703	.1697	.1690	.1684
940.0	.1677	.1671	.1665	.1658	.1652	.1646	.1640	.1633	.1627	.1621
960.0	.1615	.1609	.1603	.1597	.1590	.1584	.1578	.1572	.1566	.1561
980.0	.1555	.1549	.1543	.1537	.1531	.1525	.1520	.1514	.1508	.1502
1000.0	.1497	.1491	.1485	.1480	.1474	.1468	.1463	.1457	.1452	.1446
1020.0	.1441	.1435	.1430	.1425	.1419	.1414	.1408	.1403	.1398	.1392
1040.0	.1387	.1382	.1377	.1371	.1366	.1361	.1356	.1351	.1346	.1341
1060.0	.1335	.1330	.1325	.1320	.1315	.1310	.1305	.1300	.1295	.1291
1080.0	.1286	.1281	.1276	.1271	.1266	.1261	.1257	.1252	.1247	.1242
1100.0	.1238	.1233	.1228	.1224	.1219	.1214	.1210	.1205	.1201	.1196
1120.0	.1192	.1187	.1183	.1178	.1174	.1169	.1165	.1160	.1156	.1151
1140.0	.1147	.1143	.1138	.1134	.1130	.1126	.1121	.1117	.1113	.1109
1160.0	.1104	.1100	.1096	.1092	.1088	.1084	.1079	.1075	.1071	.1067
1180.0	.1063	.1059	.1055	.1051	.1047	.1043	.1039	.1035	.1031	.1027
1200.0	.1024	.1020	.1016	.1012	.1008	.1004	.1000	.0997	.0993	.0989

SM - 153

HALF-LIFE 46.70 HOURS CALCULATION INTERVAL .5 HOURS

HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
					HOURS					
0.0	1.0000	.9926	.9852	.9779	.9707	.9635	.9564	.9493	.9423	.9353
5.0	.9284	.9216	.9147	.9080	.9013	.8946	.8880	.8814	.8749	.8684
10.0	.8620	.8556	.8493	.8430	.8368	.8306	.8245	.8184	.8123	.8063
15.0	.8004	.7944	.7886	.7827	.7769	.7712	.7655	.7598	.7542	.7486
20.0	.7431	.7376	.7322	.7267	.7214	.7160	.7107	.7055	.7003	.6951
25.0	.6899	.6848	.6798	.6748	.6698	.6648	.6599	.6550	.6502	.6454
30.0	.6406	.6359	.6312	.6265	.6219	.6173	.6127	.6082	.6037	.5992
35.0	.5948	.5904	.5860	.5817	.5774	.5731	.5689	.5647	.5605	.5563
40.0	.5522	.5481	.5441	.5401	.5361	.5321	.5282	.5243	.5204	.5165
45.0	.5127	.5089	.5052	.5014	.4977	.4940	.4904	.4868	.4832	.4796
50.0	.4760	.4725	.4690	.4656	.4621	.4587	.4553	.4519	.4486	.4453
55.0	.4420	.4387	.4355	.4323	.4291	.4259	.4227	.4196	.4165	.4134
60.0	.4104	.4073	.4043	.4013	.3984	.3954	.3925	.3896	.3867	.3839
65.0	.3810	.3782	.3754	.3726	.3699	.3671	.3644	.3617	.3591	.3564
70.0	.3538	.3511	.3486	.3460	.3434	.3409	.3384	.3359	.3334	.3309
75.0	.3285	.3260	.3236	.3212	.3189	.3165	.3142	.3118	.3095	.3072
80.0	.3050	.3027	.3005	.2982	.2960	.2939	.2917	.2895	.2874	.2853
85.0	.2831	.2811	.2790	.2769	.2749	.2728	.2708	.2688	.2668	.2648
90.0	.2629	.2609	.2590	.2571	.2552	.2533	.2514	.2496	.2477	.2459
95.0	.2441	.2423	.2405	.2387	.2369	.2352	.2335	.2317	.2300	.2283
100.0	.2266	.2249	.2233	.2216	.2200	.2184	.2167	.2151	.2136	.2120
105.0	.2104	.2089	.2073	.2058	.2043	.2027	.2012	.1998	.1983	.1968
110.0	.1954	.1939	.1925	.1911	.1896	.1882	.1868	.1855	.1841	.1827
115.0	.1814	.1800	.1787	.1774	.1761	.1748	.1735	.1722	.1709	.1697
120.0	.1684	.1672	.1659	.1647	.1635	.1623	.1611	.1599	.1587	.1575
125.0	.1564	.1552	.1540	.1529	.1518	.1507	.1495	.1484	.1473	.1462
130.0	.1452	.1441	.1430	.1420	.1409	.1399	.1388	.1378	.1368	.1358
135.0	.1348	.1338	.1328	.1318	.1308	.1299	.1289	.1280	.1270	.1261
140.0	.1251	.1242	.1233	.1224	.1215	.1206	.1197	.1188	.1179	.1170
145.0	.1162	.1153	.1145	.1136	.1128	.1119	.1111	.1103	.1095	.1087
150.0	.1079	.1071	.1063	.1055	.1047	.1039	.1032	.1024	.1016	.1009
155.0	.1001	.0994	.0987	.0979	.0972	.0965	.0958	.0951	.0944	.0937

SC = 46

HALF-LIFE 84.00 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
0.00	1.0000	.9972	.9945	.9917	.9890	.9863	.9836	.9809	.9782	.9755	.9728	.9701
4.00	.9674	.9648	.9622	.9595	.9569	.9543	.9516	.9490	.9464	.9438	.9412	.9386
8.00	.9361	.9335	.9309	.9284	.9258	.9233	.9207	.9182	.9157	.9132	.9107	.9082
12.00	.9057	.9032	.9007	.8982	.8958	.8933	.8908	.8884	.8860	.8835	.8811	.8787
16.00	.8763	.8739	.8715	.8691	.8667	.8643	.8619	.8596	.8572	.8548	.8525	.8501
20.00	.8478	.8455	.8432	.8408	.8385	.8362	.8339	.8316	.8294	.8271	.8248	.8225
24.00	.8203	.8180	.8158	.8135	.8113	.8091	.8069	.8046	.8024	.8002	.7980	.7958
28.00	.7937	.7915	.7893	.7871	.7850	.7828	.7807	.7785	.7764	.7742	.7721	.7700
32.00	.7679	.7658	.7637	.7616	.7595	.7574	.7553	.7532	.7512	.7491	.7470	.7450
36.00	.7429	.7409	.7389	.7368	.7348	.7328	.7308	.7288	.7268	.7248	.7228	.7208
40.00	.7188	.7168	.7149	.7129	.7110	.7090	.7071	.7051	.7032	.7012	.6993	.6974
44.00	.6955	.6936	.6917	.6898	.6879	.6860	.6841	.6822	.6803	.6785	.6766	.6748
48.00	.6729	.6711	.6692	.6674	.6655	.6637	.6619	.6601	.6583	.6564	.6546	.6528
52.00	.6511	.6493	.6475	.6457	.6439	.6422	.6404	.6386	.6369	.6351	.6334	.6316
56.00	.6299	.6282	.6265	.6247	.6230	.6213	.6196	.6179	.6162	.6145	.6128	.6111
60.00	.6095	.6078	.6061	.6044	.6028	.6011	.5995	.5978	.5962	.5946	.5929	.5913
64.00	.5897	.5880	.5864	.5848	.5832	.5816	.5800	.5784	.5768	.5752	.5737	.5721
68.00	.5705	.5690	.5674	.5658	.5643	.5627	.5612	.5596	.5581	.5566	.5550	.5535
72.00	.5520	.5505	.5490	.5475	.5460	.5445	.5430	.5415	.5400	.5385	.5370	.5355
76.00	.5341	.5326	.5311	.5297	.5282	.5268	.5253	.5239	.5224	.5210	.5196	.5182
80.00	.5167	.5153	.5139	.5125	.5111	.5097	.5083	.5069	.5055	.5041	.5027	.5013
84.00	.5000	.4986	.4972	.4958	.4945	.4931	.4918	.4904	.4891	.4877	.4864	.4850
88.00	.4837	.4824	.4811	.4797	.4784	.4771	.4758	.4745	.4732	.4719	.4706	.4693
92.00	.4680	.4667	.4654	.4642	.4629	.4616	.4603	.4591	.4578	.4566	.4553	.4541
96.00	.4528	.4516	.4503	.4491	.4479	.4466	.4454	.4442	.4430	.4417	.4405	.4393
100.00	.4381	.4369	.4357	.4345	.4333	.4321	.4309	.4298	.4286	.4274	.4262	.4251
104.00	.4239	.4227	.4216	.4204	.4192	.4181	.4169	.4158	.4147	.4135	.4124	.4112
108.00	.4101	.4090	.4079	.4067	.4056	.4045	.4034	.4023	.4012	.4001	.3990	.3979
112.00	.3968	.3957	.3946	.3935	.3925	.3914	.3903	.3892	.3882	.3871	.3860	.3850
116.00	.3839	.3829	.3818	.3808	.3797	.3787	.3776	.3766	.3756	.3745	.3735	.3725
120.00	.3714	.3704	.3694	.3684	.3674	.3664	.3654	.3644	.3634	.3624	.3614	.3604
124.00	.3594	.3584	.3574	.3564	.3555	.3545	.3535	.3525	.3516	.3506	.3496	.3487
128.00	.3477	.3468	.3458	.3449	.3439	.3430	.3420	.3411	.3401	.3392	.3383	.3374
132.00	.3364	.3355	.3346	.3337	.3327	.3318	.3309	.3300	.3291	.3282	.3273	.3264
136.00	.3255	.3246	.3237	.3228	.3219	.3211	.3202	.3193	.3184	.3175	.3167	.3158
140.00	.3149	.3141	.3132	.3123	.3115	.3106	.3098	.3089	.3081	.3072	.3064	.3055
144.00	.3047	.3039	.3030	.3022	.3014	.3005	.2997	.2989	.2981	.2973	.2964	.2956
148.00	.2948	.2940	.2932	.2924	.2916	.2908	.2900	.2892	.2884	.2876	.2868	.2860
152.00	.2852	.2845	.2837	.2829	.2821	.2813	.2806	.2798	.2790	.2783	.2775	.2767
156.00	.2760	.2752	.2745	.2737	.2730	.2722	.2715	.2707	.2700	.2692	.2685	.2677

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HALF-LIFE 84.00 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
160.00	.2670	.2663	.2655	.2648	.2641	.2634	.2626	.2619	.2612	.2605	.2598	.2591
164.00	.2583	.2576	.2569	.2562	.2555	.2548	.2541	.2534	.2527	.2520	.2513	.2506
168.00	.2500	.2493	.2486	.2479	.2472	.2465	.2459	.2452	.2445	.2438	.2432	.2425
172.00	.2418	.2412	.2405	.2398	.2392	.2385	.2379	.2372	.2366	.2359	.2353	.2346
176.00	.2340	.2333	.2327	.2321	.2314	.2308	.2302	.2295	.2289	.2283	.2276	.2270
180.00	.2264	.2258	.2251	.2245	.2239	.2233	.2227	.2221	.2215	.2208	.2202	.2196
184.00	.2190	.2184	.2178	.2172	.2166	.2160	.2154	.2149	.2143	.2137	.2131	.2125
188.00	.2119	.2113	.2108	.2102	.2096	.2090	.2084	.2079	.2073	.2067	.2062	.2056
192.00	.2050	.2045	.2039	.2034	.2028	.2022	.2017	.2011	.2006	.2000	.1995	.1989
196.00	.1984	.1978	.1973	.1967	.1962	.1957	.1951	.1946	.1941	.1935	.1930	.1925
200.00	.1919	.1914	.1909	.1904	.1898	.1893	.1888	.1883	.1878	.1872	.1867	.1862
204.00	.1857	.1852	.1847	.1842	.1837	.1832	.1827	.1822	.1817	.1812	.1807	.1802
208.00	.1797	.1792	.1787	.1782	.1777	.1772	.1767	.1762	.1758	.1753	.1748	.1743
212.00	.1738	.1734	.1729	.1724	.1719	.1715	.1710	.1705	.1701	.1696	.1691	.1687
216.00	.1682	.1677	.1673	.1668	.1663	.1659	.1654	.1650	.1645	.1641	.1636	.1632
220.00	.1627	.1623	.1618	.1614	.1609	.1605	.1601	.1596	.1592	.1587	.1583	.1579
224.00	.1574	.1570	.1566	.1561	.1557	.1553	.1549	.1544	.1540	.1536	.1532	.1527
228.00	.1523	.1519	.1515	.1511	.1507	.1502	.1498	.1494	.1490	.1486	.1482	.1478
232.00	.1474	.1470	.1466	.1462	.1458	.1454	.1450	.1446	.1442	.1438	.1434	.1430
236.00	.1426	.1422	.1418	.1414	.1410	.1406	.1403	.1399	.1395	.1391	.1387	.1383
240.00	.1380	.1376	.1372	.1368	.1365	.1361	.1357	.1353	.1350	.1346	.1342	.1338
244.00	.1335	.1331	.1327	.1324	.1320	.1317	.1313	.1309	.1306	.1302	.1299	.1295
248.00	.1291	.1288	.1284	.1281	.1277	.1274	.1270	.1267	.1263	.1260	.1256	.1253
252.00	.1250	.1246	.1243	.1239	.1236	.1232	.1229	.1226	.1222	.1219	.1216	.1212
256.00	.1209	.1206	.1202	.1199	.1196	.1192	.1189	.1186	.1183	.1179	.1176	.1173
260.00	.1170	.1166	.1163	.1160	.1157	.1154	.1151	.1147	.1144	.1141	.1138	.1135
264.00	.1132	.1129	.1125	.1122	.1119	.1116	.1113	.1110	.1107	.1104	.1101	.1098
268.00	.1095	.1092	.1089	.1086	.1083	.1080	.1077	.1074	.1071	.1068	.1065	.1062
272.00	.1059	.1056	.1054	.1051	.1048	.1045	.1042	.1039	.1036	.1033	.1031	.1028
276.00	.1025	.1022	.1019	.1017	.1014	.1011	.1008	.1005	.1003	.1000	.0997	.0994

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HALF-LIFE 249.00 DAYS CALCULATION INTERVAL 2.0 DAYS

DAYS	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0
0.0	1.0000	.9944	.9889	.9834	.9779	.9725	.9671	.9617	.9564	.9511
20.0	.9458	.9405	.9353	.9301	.9250	.9198	.9147	.9096	.9046	.8996
40.0	.8946	.8896	.8847	.8798	.8749	.8700	.8652	.8604	.8556	.8509
60.0	.8461	.8414	.8368	.8321	.8275	.8229	.8183	.8138	.8093	.8048
80.0	.8003	.7959	.7914	.7870	.7827	.7783	.7740	.7697	.7654	.7612
100.0	.7570	.7528	.7486	.7444	.7403	.7362	.7321	.7280	.7240	.7200
120.0	.7160	.7120	.7080	.7041	.7002	.6963	.6924	.6886	.6848	.6810
140.0	.6772	.6734	.6697	.6660	.6623	.6586	.6549	.6513	.6477	.6441
160.0	.6405	.6370	.6334	.6299	.6264	.6229	.6195	.6160	.6126	.6092
180.0	.6058	.6025	.5991	.5958	.5925	.5892	.5859	.5827	.5794	.5762
200.0	.5730	.5698	.5667	.5635	.5604	.5573	.5542	.5511	.5481	.5450
220.0	.5420	.5390	.5360	.5330	.5301	.5271	.5242	.5213	.5184	.5155
240.0	.5126	.5098	.5070	.5041	.5013	.4986	.4958	.4930	.4903	.4876
260.0	.4849	.4822	.4795	.4768	.4742	.4716	.4689	.4663	.4637	.4612
280.0	.4586	.4561	.4535	.4510	.4485	.4460	.4435	.4411	.4386	.4362
300.0	.4338	.4314	.4290	.4266	.4242	.4219	.4195	.4172	.4149	.4126
320.0	.4103	.4080	.4057	.4035	.4012	.3990	.3968	.3946	.3924	.3902
340.0	.3881	.3859	.3838	.3816	.3795	.3774	.3753	.3732	.3712	.3691
360.0	.3670	.3650	.3630	.3610	.3590	.3570	.3550	.3530	.3511	.3491
380.0	.3472	.3452	.3433	.3414	.3395	.3376	.3358	.3339	.3320	.3302
400.0	.3284	.3265	.3247	.3229	.3211	.3193	.3176	.3158	.3141	.3123
420.0	.3106	.3089	.3071	.3054	.3037	.3020	.3004	.2987	.2970	.2954
440.0	.2938	.2921	.2905	.2889	.2873	.2857	.2841	.2825	.2810	.2794
460.0	.2778	.2763	.2748	.2732	.2717	.2702	.2687	.2672	.2657	.2643
480.0	.2628	.2613	.2599	.2584	.2570	.2556	.2542	.2527	.2513	.2500
500.0	.2486	.2472	.2458	.2444	.2431	.2417	.2404	.2391	.2377	.2364
520.0	.2351	.2338	.2325	.2312	.2299	.2286	.2274	.2261	.2249	.2236
540.0	.2224	.2211	.2199	.2187	.2175	.2163	.2151	.2139	.2127	.2115
560.0	.2103	.2092	.2080	.2068	.2057	.2045	.2034	.2023	.2012	.2000
580.0	.1989	.1978	.1967	.1956	.1945	.1935	.1924	.1913	.1903	.1892
600.0	.1882	.1871	.1861	.1850	.1840	.1830	.1820	.1810	.1800	.1790
620.0	.1780	.1770	.1760	.1750	.1740	.1731	.1721	.1712	.1702	.1693
640.0	.1683	.1674	.1665	.1655	.1646	.1637	.1628	.1619	.1610	.1601
660.0	.1592	.1583	.1574	.1566	.1557	.1548	.1540	.1531	.1523	.1514
680.0	.1506	.1497	.1489	.1481	.1473	.1464	.1456	.1448	.1440	.1432
700.0	.1424	.1416	.1408	.1401	.1393	.1385	.1377	.1370	.1362	.1355
720.0	.1347	.1340	.1332	.1325	.1317	.1310	.1303	.1296	.1288	.1281
740.0	.1274	.1267	.1260	.1253	.1246	.1239	.1232	.1225	.1219	.1212
760.0	.1205	.1198	.1192	.1185	.1179	.1172	.1165	.1159	.1153	.1146
780.0	.1140	.1133	.1127	.1121	.1115	.1108	.1102	.1096	.1090	.1084
800.0	.1078	.1072	.1066	.1060	.1054	.1048	.1043	.1037	.1031	.1025
820.0	.1020	.1014	.1008	.1003	.0997	.0992	.0986	.0981	.0975	.0970

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HALF-LIFE 7.50 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9961	.9923	.9885	.9847	.9809	.9771	.9734	.9696	.9659	.9622	.9585
.50	.9548	.9511	.9475	.9438	.9402	.9366	.9330	.9294	.9258	.9223	.9187	.9152
1.00	.9117	.9082	.9047	.9012	.8977	.8943	.8908	.8874	.8840	.8806	.8772	.8739
1.50	.8705	.8672	.8638	.8605	.8572	.8539	.8506	.8473	.8441	.8408	.8376	.8344
2.00	.8312	.8280	.8248	.8216	.8185	.8153	.8122	.8091	.8060	.8029	.7998	.7967
2.50	.7937	.7906	.7876	.7845	.7815	.7785	.7755	.7725	.7696	.7666	.7637	.7607
3.00	.7578	.7549	.7520	.7491	.7462	.7434	.7405	.7377	.7348	.7320	.7292	.7264
3.50	.7236	.7208	.7180	.7153	.7125	.7098	.7071	.7043	.7016	.6989	.6962	.6936
4.00	.6909	.6883	.6856	.6830	.6803	.6777	.6751	.6725	.6699	.6674	.6648	.6622
4.50	.6597	.6572	.6546	.6521	.6496	.6471	.6446	.6422	.6397	.6372	.6348	.6323
5.00	.6299	.6275	.6251	.6227	.6203	.6179	.6155	.6132	.6108	.6085	.6061	.6038
5.50	.6015	.5992	.5968	.5946	.5923	.5900	.5877	.5855	.5832	.5810	.5787	.5765
6.00	.5743	.5721	.5699	.5677	.5655	.5633	.5612	.5590	.5569	.5547	.5526	.5505
6.50	.5484	.5463	.5442	.5421	.5400	.5379	.5358	.5338	.5317	.5297	.5276	.5256
7.00	.5236	.5216	.5196	.5176	.5156	.5136	.5116	.5097	.5077	.5058	.5038	.5019
7.50	.5000	.4980	.4961	.4942	.4923	.4904	.4885	.4867	.4848	.4829	.4811	.4792
8.00	.4774	.4755	.4737	.4719	.4701	.4683	.4665	.4647	.4629	.4611	.4593	.4576
8.50	.4558	.4541	.4523	.4506	.4488	.4471	.4454	.4437	.4420	.4403	.4386	.4369
9.00	.4352	.4336	.4319	.4302	.4286	.4269	.4253	.4236	.4220	.4204	.4188	.4172
9.50	.4156	.4140	.4124	.4108	.4092	.4076	.4061	.4045	.4030	.4014	.3999	.3983
10.00	.3968	.3953	.3938	.3922	.3907	.3892	.3877	.3862	.3848	.3833	.3818	.3803
10.50	.3789	.3774	.3760	.3745	.3731	.3717	.3702	.3688	.3674	.3660	.3646	.3632
11.00	.3618	.3604	.3590	.3576	.3562	.3549	.3535	.3521	.3508	.3494	.3481	.3468
11.50	.3454	.3441	.3428	.3415	.3401	.3388	.3375	.3362	.3349	.3337	.3324	.3311
12.00	.3298	.3286	.3273	.3260	.3248	.3235	.3223	.3211	.3198	.3186	.3174	.3161
12.50	.3149	.3137	.3125	.3113	.3101	.3089	.3077	.3066	.3054	.3042	.3030	.3019
13.00	.3007	.2996	.2984	.2973	.2961	.2950	.2938	.2927	.2916	.2905	.2893	.2882
13.50	.2871	.2860	.2849	.2838	.2827	.2817	.2806	.2795	.2784	.2773	.2763	.2752
14.00	.2742	.2731	.2721	.2710	.2700	.2689	.2679	.2669	.2658	.2648	.2638	.2628
14.50	.2618	.2608	.2598	.2588	.2578	.2568	.2558	.2548	.2538	.2529	.2519	.2509
15.00	.2500	.2490	.2480	.2471	.2461	.2452	.2442	.2433	.2424	.2414	.2405	.2396
15.50	.2387	.2377	.2368	.2359	.2350	.2341	.2332	.2323	.2314	.2305	.2296	.2288
16.00	.2279	.2270	.2261	.2253	.2244	.2235	.2227	.2218	.2210	.2201	.2193	.2184
16.50	.2176	.2168	.2159	.2151	.2143	.2134	.2126	.2118	.2110	.2102	.2094	.2086
17.00	.2078	.2070	.2062	.2054	.2046	.2038	.2030	.2022	.2015	.2007	.1999	.1991
17.50	.1984	.1976	.1969	.1961	.1953	.1946	.1938	.1931	.1924	.1916	.1909	.1901
18.00	.1894	.1887	.1880	.1872	.1865	.1858	.1851	.1844	.1837	.1830	.1823	.1816
18.50	.1809	.1802	.1795	.1788	.1781	.1774	.1767	.1760	.1754	.1747	.1740	.1734
19.00	.1727	.1720	.1714	.1707	.1701	.1694	.1687	.1681	.1675	.1668	.1662	.1655
19.50	.1649	.1643	.1636	.1630	.1624	.1617	.1611	.1605	.1599	.1593	.1587	.1581

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HALF-LIFE 7.50 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
20.00	.1574	.1568	.1562	.1556	.1550	.1544	.1538	.1533	.1527	.1521	.1515	.1509
20.50	.1503	.1498	.1492	.1486	.1480	.1475	.1469	.1463	.1458	.1452	.1446	.1441
21.00	.1435	.1430	.1424	.1419	.1413	.1408	.1403	.1397	.1392	.1386	.1381	.1376
21.50	.1371	.1365	.1360	.1355	.1350	.1344	.1339	.1334	.1329	.1324	.1319	.1314
22.00	.1309	.1304	.1299	.1294	.1289	.1284	.1279	.1274	.1269	.1264	.1259	.1254
22.50	.1250	.1245	.1240	.1235	.1230	.1226	.1221	.1216	.1212	.1207	.1202	.1198
23.00	.1193	.1188	.1184	.1179	.1175	.1170	.1166	.1161	.1157	.1152	.1148	.1144
23.50	.1139	.1135	.1130	.1126	.1122	.1117	.1113	.1109	.1105	.1100	.1096	.1092
24.00	.1088	.1084	.1079	.1075	.1071	.1067	.1063	.1059	.1055	.1051	.1047	.1043
24.50	.1039	.1035	.1031	.1027	.1023	.1019	.1015	.1011	.1007	.1003	.0999	.0995

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HALF-LIFE 3.20 HOURS CALCULATION INTERVAL 1.0 MINUTES

HOURS	MINUTES 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9963	.9928	.9892	.9856	.9821	.9785	.9750	.9715	.9680	.9645	.9610
.20	.9576	.9541	.9507	.9472	.9438	.9404	.9370	.9337	.9303	.9269	.9236	.9203
.40	.9170	.9136	.9104	.9071	.9038	.9006	.8973	.8941	.8908	.8876	.8844	.8813
.60	.8781	.8749	.8718	.8686	.8655	.8624	.8593	.8562	.8531	.8500	.8469	.8439
.80	.8408	.8378	.8348	.8318	.8288	.8258	.8228	.8199	.8169	.8140	.8110	.8081
1.00	.8052	.8023	.7994	.7965	.7937	.7908	.7879	.7851	.7823	.7795	.7766	.7738
1.20	.7711	.7683	.7655	.7627	.7600	.7573	.7545	.7518	.7491	.7464	.7437	.7410
1.40	.7384	.7357	.7331	.7304	.7278	.7252	.7225	.7199	.7173	.7148	.7122	.7096
1.60	.7071	.7045	.7020	.6994	.6969	.6944	.6919	.6894	.6869	.6845	.6820	.6795
1.80	.6771	.6746	.6722	.6698	.6674	.6650	.6626	.6602	.6578	.6554	.6531	.6507
2.00	.6484	.6460	.6437	.6414	.6391	.6368	.6345	.6322	.6299	.6276	.6254	.6231
2.20	.6209	.6186	.6164	.6142	.6120	.6098	.6076	.6054	.6032	.6010	.5989	.5967
2.40	.5946	.5924	.5903	.5881	.5860	.5839	.5818	.5797	.5776	.5755	.5735	.5714
2.60	.5693	.5673	.5652	.5632	.5612	.5592	.5571	.5551	.5531	.5511	.5492	.5472
2.80	.5452	.5432	.5413	.5393	.5374	.5355	.5335	.5316	.5297	.5278	.5259	.5240
3.00	.5221	.5202	.5183	.5165	.5146	.5127	.5109	.5091	.5072	.5054	.5036	.5018
3.20	.5000	.4981	.4964	.4946	.4928	.4910	.4892	.4875	.4857	.4840	.4822	.4805
3.40	.4788	.4770	.4753	.4736	.4719	.4702	.4685	.4668	.4651	.4634	.4618	.4601
3.60	.4585	.4568	.4552	.4535	.4519	.4503	.4486	.4470	.4454	.4438	.4422	.4406
3.80	.4390	.4374	.4359	.4343	.4327	.4312	.4296	.4281	.4265	.4250	.4234	.4219
4.00	.4204	.4189	.4174	.4159	.4144	.4129	.4114	.4099	.4084	.4070	.4055	.4040
4.20	.4026	.4011	.3997	.3982	.3968	.3954	.3939	.3925	.3911	.3897	.3883	.3869
4.40	.3855	.3841	.3827	.3814	.3800	.3786	.3772	.3759	.3745	.3732	.3718	.3705
4.60	.3692	.3678	.3665	.3652	.3639	.3626	.3612	.3599	.3586	.3574	.3561	.3548
4.80	.3535	.3522	.3510	.3497	.3484	.3472	.3459	.3447	.3434	.3422	.3410	.3397
5.00	.3385	.3373	.3361	.3349	.3337	.3325	.3313	.3301	.3289	.3277	.3265	.3253
5.20	.3242	.3230	.3218	.3207	.3195	.3184	.3172	.3161	.3149	.3138	.3127	.3115
5.40	.3104	.3093	.3082	.3071	.3060	.3049	.3038	.3027	.3016	.3005	.2994	.2983
5.60	.2973	.2962	.2951	.2941	.2930	.2919	.2909	.2898	.2888	.2877	.2867	.2857
5.80	.2846	.2836	.2826	.2816	.2806	.2796	.2785	.2775	.2765	.2755	.2746	.2736
6.00	.2726	.2716	.2706	.2696	.2687	.2677	.2667	.2658	.2648	.2639	.2629	.2620
6.20	.2610	.2601	.2591	.2582	.2573	.2563	.2554	.2545	.2536	.2527	.2518	.2509
6.40	.2500	.2491	.2482	.2473	.2464	.2455	.2446	.2437	.2428	.2420	.2411	.2402
6.60	.2394	.2385	.2376	.2368	.2359	.2351	.2342	.2334	.2325	.2317	.2309	.2300
6.80	.2292	.2284	.2276	.2267	.2259	.2251	.2243	.2235	.2227	.2219	.2211	.2203
7.00	.2195	.2187	.2179	.2171	.2163	.2156	.2148	.2140	.2132	.2125	.2117	.2109
7.20	.2102	.2094	.2087	.2079	.2072	.2064	.2057	.2049	.2042	.2035	.2027	.2020
7.40	.2013	.2005	.1998	.1991	.1984	.1977	.1969	.1962	.1955	.1948	.1941	.1934
7.60	.1927	.1920	.1913	.1907	.1900	.1893	.1886	.1879	.1872	.1866	.1859	.1852
7.80	.1846	.1839	.1832	.1826	.1819	.1813	.1806	.1799	.1793	.1787	.1780	.1774

AG - 112

HALF-LIFE 3.20 HOURS CALCULATION INTERVAL 1.0 MINUTES

HOURS	MINUTES 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
8.00	.1767	.1761	.1755	.1748	.1742	.1736	.1729	.1723	.1717	.1711	.1705	.1698
8.20	.1692	.1686	.1680	.1674	.1668	.1662	.1656	.1650	.1644	.1638	.1632	.1626
8.40	.1621	.1615	.1609	.1603	.1597	.1592	.1586	.1580	.1574	.1569	.1563	.1557
8.60	.1552	.1546	.1541	.1535	.1530	.1524	.1519	.1513	.1508	.1502	.1497	.1491
8.80	.1486	.1481	.1475	.1470	.1465	.1459	.1454	.1449	.1444	.1438	.1433	.1428
9.00	.1423	.1418	.1413	.1408	.1403	.1398	.1392	.1387	.1382	.1377	.1373	.1368
9.20	.1363	.1358	.1353	.1348	.1343	.1338	.1333	.1329	.1324	.1319	.1314	.1310
9.40	.1305	.1300	.1295	.1291	.1286	.1282	.1277	.1272	.1268	.1263	.1259	.1254
9.60	.1250	.1245	.1241	.1236	.1232	.1227	.1223	.1218	.1214	.1210	.1205	.1201
9.80	.1197	.1192	.1188	.1184	.1179	.1175	.1171	.1167	.1162	.1158	.1154	.1150
10.00	.1146	.1142	.1138	.1133	.1129	.1125	.1121	.1117	.1113	.1109	.1105	.1101
10.20	.1097	.1093	.1089	.1085	.1081	.1078	.1074	.1070	.1066	.1062	.1058	.1054
10.40	.1051	.1047	.1043	.1039	.1036	.1032	.1028	.1024	.1021	.1017	.1013	.1010
10.60	.1006	.1002	.0999	.0995	.0992	.0988	.0985	.0981	.0977	.0974	.0970	.0967

NA - 22

HALF-LIFE 2.58 YEARS CALCULATION INTERVAL 5.0 DAYS

DAYS	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0
0.0	1.0000	.9963	.9926	.9890	.9853	.9817	.9781	.9745	.9709	.9674
50.0	.9638	.9603	.9567	.9532	.9497	.9462	.9428	.9393	.9359	.9324
100.0	.9290	.9256	.9222	.9188	.9154	.9120	.9087	.9054	.9020	.8987
150.0	.8954	.8921	.8889	.8856	.8823	.8791	.8759	.8726	.8694	.8662
200.0	.8631	.8599	.8567	.8536	.8504	.8473	.8442	.8411	.8380	.8349
250.0	.8319	.8288	.8258	.8227	.8197	.8167	.8137	.8107	.8077	.8048
300.0	.8018	.7989	.7959	.7930	.7901	.7872	.7843	.7814	.7785	.7757
350.0	.7728	.7700	.7672	.7644	.7615	.7587	.7560	.7532	.7504	.7477
400.0	.7449	.7422	.7394	.7367	.7340	.7313	.7286	.7260	.7233	.7206
450.0	.7180	.7154	.7127	.7101	.7075	.7049	.7023	.6997	.6972	.6946
500.0	.6920	.6895	.6870	.6844	.6819	.6794	.6769	.6744	.6720	.6695
550.0	.6670	.6646	.6621	.6597	.6573	.6549	.6525	.6501	.6477	.6453
600.0	.6429	.6406	.6382	.6359	.6335	.6312	.6289	.6266	.6243	.6220
650.0	.6197	.6174	.6152	.6129	.6106	.6084	.6062	.6039	.6017	.5995
700.0	.5973	.5951	.5929	.5907	.5886	.5864	.5843	.5821	.5800	.5778
750.0	.5757	.5736	.5715	.5694	.5673	.5652	.5631	.5611	.5590	.5570
800.0	.5549	.5529	.5508	.5488	.5468	.5448	.5428	.5408	.5388	.5368
850.0	.5349	.5329	.5309	.5290	.5270	.5251	.5232	.5213	.5193	.5174
900.0	.5155	.5136	.5118	.5099	.5080	.5061	.5043	.5024	.5006	.4987
950.0	.4969	.4951	.4933	.4914	.4896	.4878	.4861	.4843	.4825	.4807
1000.0	.4789	.4772	.4754	.4737	.4719	.4702	.4685	.4668	.4651	.4633
1050.0	.4616	.4599	.4583	.4566	.4549	.4532	.4516	.4499	.4482	.4466
1100.0	.4450	.4433	.4417	.4401	.4385	.4368	.4352	.4336	.4320	.4305
1150.0	.4289	.4273	.4257	.4242	.4226	.4211	.4195	.4180	.4164	.4149
1200.0	.4134	.4119	.4103	.4088	.4073	.4058	.4043	.4029	.4014	.3999
1250.0	.3984	.3970	.3955	.3941	.3926	.3912	.3897	.3883	.3869	.3855
1300.0	.3840	.3826	.3812	.3798	.3784	.3770	.3757	.3743	.3729	.3715
1350.0	.3702	.3688	.3674	.3661	.3648	.3634	.3621	.3607	.3594	.3581
1400.0	.3568	.3555	.3542	.3529	.3516	.3503	.3490	.3477	.3464	.3452
1450.0	.3439	.3426	.3414	.3401	.3389	.3376	.3364	.3351	.3339	.3327
1500.0	.3315	.3302	.3290	.3278	.3266	.3254	.3242	.3230	.3218	.3207
1550.0	.3195	.3183	.3171	.3160	.3148	.3137	.3125	.3114	.3102	.3091
1600.0	.3079	.3068	.3057	.3046	.3034	.3023	.3012	.3001	.2990	.2979
1650.0	.2968	.2957	.2946	.2936	.2925	.2914	.2903	.2893	.2882	.2871
1700.0	.2861	.2850	.2840	.2829	.2819	.2809	.2798	.2788	.2778	.2768
1750.0	.2757	.2747	.2737	.2727	.2717	.2707	.2697	.2687	.2677	.2668
1800.0	.2658	.2648	.2638	.2629	.2619	.2609	.2600	.2590	.2581	.2571
1850.0	.2562	.2552	.2543	.2534	.2524	.2515	.2506	.2497	.2487	.2478
1900.0	.2469	.2460	.2451	.2442	.2433	.2424	.2415	.2406	.2397	.2389
1950.0	.2380	.2371	.2362	.2354	.2345	.2337	.2328	.2319	.2311	.2302

NA - 22

HALF-LIFE 2.58 YEARS CALCULATION INTERVAL 5.0 DAYS

DAYS	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0
2000.0	.2294	.2285	.2277	.2269	.2260	.2252	.2244	.2236	.2227	.2219
2050.0	.2211	.2203	.2195	.2187	.2179	.2171	.2163	.2155	.2147	.2139
2100.0	.2131	.2123	.2115	.2108	.2100	.2092	.2085	.2077	.2069	.2062
2150.0	.2054	.2047	.2039	.2031	.2024	.2017	.2009	.2002	.1994	.1987
2200.0	.1980	.1973	.1965	.1958	.1951	.1944	.1937	.1929	.1922	.1915
2250.0	.1908	.1901	.1894	.1887	.1880	.1873	.1867	.1860	.1853	.1846
2300.0	.1839	.1833	.1826	.1819	.1812	.1806	.1799	.1792	.1786	.1779
2350.0	.1773	.1766	.1760	.1753	.1747	.1740	.1734	.1728	.1721	.1715
2400.0	.1709	.1702	.1696	.1690	.1684	.1678	.1671	.1665	.1659	.1653
2450.0	.1647	.1641	.1635	.1629	.1623	.1617	.1611	.1605	.1599	.1593
2500.0	.1587	.1582	.1576	.1570	.1564	.1558	.1553	.1547	.1541	.1536
2550.0	.1530	.1524	.1519	.1513	.1508	.1502	.1497	.1491	.1486	.1480
2600.0	.1475	.1469	.1464	.1459	.1453	.1448	.1443	.1437	.1432	.1427
2650.0	.1421	.1416	.1411	.1406	.1401	.1396	.1390	.1385	.1380	.1375
2700.0	.1370	.1365	.1360	.1355	.1350	.1345	.1340	.1335	.1330	.1325
2750.0	.1321	.1316	.1311	.1306	.1301	.1296	.1292	.1287	.1282	.1278
2800.0	.1273	.1268	.1263	.1259	.1254	.1250	.1245	.1240	.1236	.1231
2850.0	.1227	.1222	.1218	.1213	.1209	.1204	.1200	.1196	.1191	.1187
2900.0	.1182	.1178	.1174	.1169	.1165	.1161	.1157	.1152	.1148	.1144
2950.0	.1140	.1136	.1131	.1127	.1123	.1119	.1115	.1111	.1107	.1103
3000.0	.1099	.1094	.1090	.1086	.1082	.1078	.1075	.1071	.1067	.1063
3050.0	.1059	.1055	.1051	.1047	.1043	.1039	.1036	.1032	.1028	.1024
3100.0	.1021	.1017	.1013	.1009	.1006	.1002	.0998	.0995	.0991	.0987

NA - 24

HALF-LIFE 14.97 HOURS CALCULATION INTERVAL 10.0 MINUTES

MINUTES

HOURS	0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0
0.00	1.0000	.9923	.9846	.9771	.9696	.9621	.9547	.9474	.9401	.9329	.9257	.9186
2.00	.9115	.9045	.8975	.8906	.8838	.8770	.8703	.8636	.8569	.8503	.8438	.8373
4.00	.8309	.8245	.8182	.8119	.8056	.7994	.7933	.7872	.7811	.7751	.7692	.7633
6.00	.7574	.7516	.7458	.7401	.7344	.7287	.7231	.7176	.7120	.7066	.7011	.6957
8.00	.6904	.6851	.6798	.6746	.6694	.6643	.6592	.6541	.6491	.6441	.6391	.6342
10.00	.6293	.6245	.6197	.6149	.6102	.6055	.6009	.5962	.5916	.5871	.5826	.5781
12.00	.5737	.5693	.5649	.5605	.5562	.5519	.5477	.5435	.5393	.5352	.5311	.5270
14.00	.5229	.5189	.5149	.5110	.5070	.5031	.4993	.4954	.4916	.4878	.4841	.4804
16.00	.4767	.4730	.4694	.4658	.4622	.4586	.4551	.4516	.4481	.4447	.4413	.4379
18.00	.4345	.4312	.4278	.4246	.4213	.4181	.4148	.4116	.4085	.4053	.4022	.3991
20.00	.3961	.3930	.3900	.3870	.3840	.3811	.3781	.3752	.3724	.3695	.3666	.3638
22.00	.3610	.3583	.3555	.3529	.3501	.3474	.3447	.3420	.3394	.3368	.3342	.3316
24.00	.3291	.3266	.3241	.3216	.3191	.3166	.3142	.3118	.3094	.3070	.3047	.3023
26.00	.3000	.2977	.2954	.2931	.2909	.2886	.2864	.2842	.2820	.2799	.2777	.2756
28.00	.2734	.2713	.2693	.2672	.2651	.2631	.2611	.2591	.2571	.2551	.2531	.2512
30.00	.2493	.2473	.2454	.2436	.2417	.2398	.2380	.2361	.2343	.2325	.2307	.2290
32.00	.2272	.2255	.2237	.2220	.2203	.2186	.2169	.2153	.2136	.2120	.2103	.2087
34.00	.2071	.2055	.2039	.2024	.2008	.1993	.1977	.1962	.1947	.1932	.1917	.1902
36.00	.1888	.1873	.1859	.1845	.1830	.1816	.1802	.1789	.1775	.1761	.1748	.1734
38.00	.1721	.1708	.1694	.1681	.1669	.1656	.1643	.1630	.1618	.1605	.1593	.1581
40.00	.1569	.1557	.1545	.1533	.1521	.1509	.1498	.1486	.1475	.1463	.1452	.1441
42.00	.1430	.1419	.1408	.1397	.1386	.1376	.1365	.1355	.1344	.1334	.1324	.1313
44.00	.1303	.1293	.1283	.1273	.1264	.1254	.1244	.1235	.1225	.1216	.1206	.1197
46.00	.1188	.1179	.1170	.1161	.1152	.1143	.1134	.1125	.1117	.1108	.1100	.1091
48.00	.1083	.1075	.1066	.1058	.1050	.1042	.1034	.1026	.1018	.1010	.1002	.0995

SR - 85

HALF-LIFE 64.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
0.00	1.0000	.9972	.9945	.9919	.9892	.9865	.9838	.9812	.9785	.9759	.9732	.9706
3.00	.9680	.9654	.9628	.9601	.9576	.9550	.9524	.9498	.9472	.9447	.9421	.9396
6.00	.9370	.9345	.9320	.9295	.9269	.9244	.9219	.9194	.9170	.9145	.9120	.9095
9.00	.9071	.9046	.9022	.8997	.8973	.8949	.8925	.8900	.8876	.8852	.8828	.8805
12.00	.8781	.8757	.8733	.8710	.8686	.8663	.8639	.8616	.8593	.8569	.8546	.8523
15.00	.8500	.8477	.8454	.8431	.8408	.8386	.8363	.8340	.8318	.8295	.8273	.8251
18.00	.8228	.8206	.8184	.8162	.8140	.8118	.8096	.8074	.8052	.8030	.8008	.7987
21.00	.7965	.7944	.7922	.7901	.7879	.7858	.7837	.7816	.7795	.7773	.7752	.7731
24.00	.7711	.7690	.7669	.7648	.7627	.7607	.7586	.7566	.7545	.7525	.7505	.7484
27.00	.7464	.7444	.7424	.7404	.7384	.7364	.7344	.7324	.7304	.7284	.7265	.7245
30.00	.7225	.7206	.7186	.7167	.7148	.7128	.7109	.7090	.7071	.7051	.7032	.7013
33.00	.6994	.6975	.6957	.6938	.6919	.6900	.6882	.6863	.6845	.6826	.6808	.6789
36.00	.6771	.6752	.6734	.6716	.6698	.6680	.6662	.6644	.6626	.6608	.6590	.6572
39.00	.6554	.6537	.6519	.6501	.6484	.6466	.6449	.6431	.6414	.6397	.6379	.6362
42.00	.6345	.6328	.6310	.6293	.6276	.6259	.6243	.6226	.6209	.6192	.6175	.6159
45.00	.6142	.6125	.6109	.6092	.6076	.6059	.6043	.6027	.6010	.5994	.5978	.5962
48.00	.5946	.5929	.5913	.5897	.5881	.5866	.5850	.5834	.5818	.5802	.5787	.5771
51.00	.5755	.5740	.5724	.5709	.5693	.5678	.5663	.5647	.5632	.5617	.5602	.5587
54.00	.5571	.5556	.5541	.5526	.5511	.5497	.5482	.5467	.5452	.5437	.5423	.5408
57.00	.5393	.5379	.5364	.5350	.5335	.5321	.5306	.5292	.5278	.5263	.5249	.5235
60.00	.5221	.5207	.5193	.5179	.5165	.5151	.5137	.5123	.5109	.5095	.5081	.5068
63.00	.5054	.5040	.5027	.5013	.5000	.4986	.4972	.4959	.4946	.4932	.4919	.4906
66.00	.4892	.4879	.4866	.4853	.4840	.4827	.4814	.4800	.4788	.4775	.4762	.4749
69.00	.4736	.4723	.4710	.4698	.4685	.4672	.4660	.4647	.4634	.4622	.4609	.4597
72.00	.4585	.4572	.4560	.4547	.4535	.4523	.4511	.4498	.4486	.4474	.4462	.4450
75.00	.4438	.4426	.4414	.4402	.4390	.4378	.4366	.4355	.4343	.4331	.4319	.4308
78.00	.4296	.4284	.4273	.4261	.4250	.4238	.4227	.4215	.4204	.4193	.4181	.4170
81.00	.4159	.4147	.4136	.4125	.4114	.4103	.4092	.4081	.4070	.4059	.4048	.4037
84.00	.4026	.4015	.4004	.3993	.3982	.3972	.3961	.3950	.3939	.3929	.3918	.3908
87.00	.3897	.3886	.3876	.3865	.3855	.3845	.3834	.3824	.3813	.3803	.3793	.3783
90.00	.3772	.3762	.3752	.3742	.3732	.3722	.3712	.3702	.3692	.3682	.3672	.3662
93.00	.3652	.3642	.3632	.3622	.3612	.3603	.3593	.3583	.3574	.3564	.3554	.3545
96.00	.3535	.3525	.3516	.3506	.3497	.3487	.3478	.3469	.3459	.3450	.3441	.3431
99.00	.3422	.3413	.3404	.3394	.3385	.3376	.3367	.3358	.3349	.3340	.3331	.3322
102.00	.3313	.3304	.3295	.3286	.3277	.3268	.3259	.3250	.3242	.3233	.3224	.3215
105.00	.3207	.3198	.3189	.3181	.3172	.3164	.3155	.3146	.3138	.3129	.3121	.3113
108.00	.3104	.3096	.3087	.3079	.3071	.3062	.3054	.3046	.3038	.3029	.3021	.3013
111.00	.3005	.2997	.2989	.2981	.2973	.2964	.2956	.2948	.2940	.2933	.2925	.2917
114.00	.2909	.2901	.2893	.2885	.2877	.2870	.2862	.2854	.2846	.2839	.2831	.2823
117.00	.2816	.2808	.2801	.2793	.2785	.2778	.2770	.2763	.2755	.2748	.2741	.2733

SR - 85

HALF-LIFE 64.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
120.00	.2726	.2718	.2711	.2704	.2696	.2689	.2682	.2675	.2667	.2660	.2653	.2646
123.00	.2639	.2631	.2624	.2617	.2610	.2603	.2596	.2589	.2582	.2575	.2568	.2561
126.00	.2554	.2547	.2540	.2534	.2527	.2520	.2513	.2506	.2500	.2493	.2486	.2479
129.00	.2473	.2466	.2459	.2453	.2446	.2439	.2433	.2426	.2420	.2413	.2407	.2400
132.00	.2394	.2387	.2381	.2374	.2368	.2361	.2355	.2349	.2342	.2336	.2330	.2323
135.00	.2317	.2311	.2304	.2298	.2292	.2286	.2280	.2273	.2267	.2261	.2255	.2249
138.00	.2243	.2237	.2231	.2225	.2219	.2213	.2207	.2201	.2195	.2189	.2183	.2177
141.00	.2171	.2165	.2159	.2154	.2148	.2142	.2136	.2130	.2125	.2119	.2113	.2107
144.00	.2102	.2096	.2090	.2085	.2079	.2073	.2068	.2062	.2057	.2051	.2046	.2040
147.00	.2034	.2029	.2024	.2018	.2013	.2007	.2002	.1996	.1991	.1986	.1980	.1975
150.00	.1969	.1964	.1959	.1954	.1948	.1943	.1938	.1933	.1927	.1922	.1917	.1912
153.00	.1906	.1901	.1896	.1891	.1886	.1881	.1876	.1871	.1866	.1861	.1856	.1851
156.00	.1846	.1841	.1836	.1831	.1826	.1821	.1816	.1811	.1806	.1801	.1796	.1791
159.00	.1787	.1782	.1777	.1772	.1767	.1762	.1758	.1753	.1748	.1743	.1739	.1734
162.00	.1729	.1725	.1720	.1715	.1711	.1706	.1702	.1697	.1692	.1688	.1683	.1679
165.00	.1674	.1670	.1665	.1661	.1656	.1652	.1647	.1643	.1638	.1634	.1629	.1625
168.00	.1621	.1616	.1612	.1607	.1603	.1599	.1594	.1590	.1586	.1582	.1577	.1573
171.00	.1569	.1564	.1560	.1556	.1552	.1548	.1543	.1539	.1535	.1531	.1527	.1523
174.00	.1519	.1514	.1510	.1506	.1502	.1498	.1494	.1490	.1486	.1482	.1478	.1474
177.00	.1470	.1466	.1462	.1458	.1454	.1450	.1446	.1442	.1438	.1435	.1431	.1427
180.00	.1423	.1419	.1415	.1411	.1408	.1404	.1400	.1396	.1392	.1389	.1385	.1381
183.00	.1377	.1374	.1370	.1366	.1362	.1359	.1355	.1352	.1348	.1344	.1341	.1337
186.00	.1333	.1330	.1326	.1323	.1319	.1315	.1312	.1308	.1305	.1301	.1298	.1294
189.00	.1291	.1287	.1284	.1280	.1277	.1273	.1270	.1267	.1263	.1260	.1256	.1253
192.00	.1250	.1246	.1243	.1239	.1236	.1233	.1229	.1226	.1223	.1219	.1216	.1213
195.00	.1210	.1206	.1203	.1200	.1197	.1193	.1190	.1187	.1184	.1180	.1177	.1174
198.00	.1171	.1168	.1165	.1161	.1158	.1155	.1152	.1149	.1146	.1143	.1140	.1136
201.00	.1133	.1130	.1127	.1124	.1121	.1118	.1115	.1112	.1109	.1106	.1103	.1100
204.00	.1097	.1094	.1091	.1088	.1085	.1082	.1079	.1077	.1074	.1071	.1068	.1065
207.00	.1062	.1059	.1056	.1053	.1051	.1048	.1045	.1042	.1039	.1036	.1034	.1031
210.00	.1028	.1025	.1023	.1020	.1017	.1014	.1012	.1009	.1006	.1003	.1001	.0998
213.00	.0995	.0993	.0990	.0987	.0984	.0982	.0979	.0977	.0974	.0971	.0969	.0966
216.00	.0963	.0961	.0958	.0956	.0953	.0950	.0948	.0945	.0943	.0940	.0938	.0935
219.00	.0933	.0930	.0928	.0925	.0923	.0920	.0918	.0915	.0913	.0910	.0908	.0905
222.00	.0903	.0900	.0898	.0895	.0893	.0891	.0888	.0886	.0883	.0881	.0879	.0876
225.00	.0874	.0871	.0869	.0867	.0864	.0862	.0860	.0857	.0855	.0853	.0851	.0848
228.00	.0846	.0844	.0841	.0839	.0837	.0835	.0832	.0830	.0828	.0826	.0823	.0821
231.00	.0819	.0817	.0814	.0812	.0810	.0808	.0806	.0803	.0801	.0799	.0797	.0795
234.00	.0793	.0791	.0789	.0786	.0784	.0782	.0780	.0778	.0776	.0774	.0771	.0769
237.00	.0767	.0765	.0763	.0761	.0759	.0757	.0755	.0753	.0751	.0749	.0747	.0745

SR - 85

HALF-LIFE 64.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
240.00	.0743	.0741	.0739	.0737	.0735	.0733	.0731	.0729	.0727	.0725	.0723	.0721
243.00	.0719	.0717	.0715	.0713	.0711	.0709	.0707	.0705	.0704	.0702	.0700	.0698
246.00	.0696	.0694	.0692	.0690	.0688	.0687	.0685	.0683	.0681	.0679	.0677	.0676
249.00	.0674	.0672	.0670	.0668	.0666	.0665	.0663	.0661	.0659	.0657	.0656	.0654
252.00	.0652	.0650	.0649	.0647	.0645	.0643	.0642	.0640	.0638	.0636	.0635	.0633
255.00	.0631	.0630	.0628	.0626	.0625	.0623	.0621	.0619	.0618	.0616	.0614	.0613
258.00	.0611	.0609	.0608	.0606	.0605	.0603	.0601	.0600	.0598	.0596	.0595	.0593
261.00	.0592	.0590	.0588	.0587	.0585	.0584	.0582	.0580	.0579	.0577	.0576	.0574
264.00	.0573	.0571	.0570	.0568	.0566	.0565	.0563	.0562	.0560	.0559	.0557	.0556
267.00	.0554	.0553	.0551	.0550	.0548	.0547	.0545	.0544	.0542	.0541	.0539	.0538
270.00	.0537	.0535	.0534	.0532	.0531	.0529	.0528	.0526	.0525	.0524	.0522	.0521
273.00	.0519	.0518	.0517	.0515	.0514	.0512	.0511	.0510	.0508	.0507	.0506	.0504
276.00	.0503	.0501	.0500	.0499	.0497	.0496	.0495	.0493	.0492	.0491	.0489	.0488
279.00	.0487	.0485	.0484	.0483	.0481	.0480	.0479	.0478	.0476	.0475	.0474	.0472
282.00	.0471	.0470	.0469	.0467	.0466	.0465	.0464	.0462	.0461	.0460	.0459	.0457
285.00	.0456	.0455	.0454	.0452	.0451	.0450	.0449	.0447	.0446	.0445	.0444	.0443
288.00	.0441	.0440	.0439	.0438	.0437	.0435	.0434	.0433	.0432	.0431	.0430	.0428
291.00	.0427	.0426	.0425	.0424	.0423	.0422	.0420	.0419	.0418	.0417	.0416	.0415
294.00	.0414	.0413	.0411	.0410	.0409	.0408	.0407	.0406	.0405	.0404	.0403	.0401
297.00	.0400	.0399	.0398	.0397	.0396	.0395	.0394	.0393	.0392	.0391	.0390	.0389
300.00	.0388	.0387	.0385	.0384	.0383	.0382	.0381	.0380	.0379	.0378	.0377	.0376
303.00	.0375	.0374	.0373	.0372	.0371	.0370	.0369	.0368	.0367	.0366	.0365	.0364
306.00	.0363	.0362	.0361	.0360	.0359	.0358	.0357	.0356	.0355	.0354	.0353	.0352
309.00	.0352	.0351	.0350	.0349	.0348	.0347	.0346	.0345	.0344	.0343	.0342	.0341
312.00	.0340	.0339	.0338	.0338	.0337	.0336	.0335	.0334	.0333	.0332	.0331	.0330
315.00	.0329	.0328	.0328	.0327	.0326	.0325	.0324	.0323	.0322	.0321	.0321	.0320
318.00	.0319	.0318	.0317	.0316	.0315	.0315	.0314	.0313	.0312	.0311	.0310	.0309
321.00	.0309	.0308	.0307	.0306	.0305	.0304	.0304	.0303	.0302	.0301	.0300	.0300
324.00	.0299	.0298	.0297	.0296	.0296	.0295	.0294	.0293	.0292	.0292	.0291	.0290
327.00	.0289	.0288	.0288	.0287	.0286	.0285	.0285	.0284	.0283	.0282	.0281	.0281
330.00	.0280	.0279	.0278	.0278	.0277	.0276	.0275	.0275	.0274	.0273	.0272	.0272
333.00	.0271	.0270	.0269	.0269	.0268	.0267	.0267	.0266	.0265	.0264	.0264	.0263
336.00	.0262	.0262	.0261	.0260	.0259	.0259	.0258	.0257	.0257	.0256	.0255	.0255
339.00	.0254	.0253	.0253	.0252	.0251	.0250	.0250	.0249	.0248	.0248	.0247	.0246
342.00	.0246	.0245	.0244	.0244	.0243	.0242	.0242	.0241	.0240	.0240	.0239	.0239
345.00	.0238	.0237	.0237	.0236	.0235	.0235	.0234	.0233	.0233	.0232	.0232	.0231
348.00	.0230	.0230	.0229	.0228	.0228	.0227	.0227	.0226	.0225	.0225	.0224	.0223
351.00	.0223	.0222	.0222	.0221	.0220	.0220	.0219	.0219	.0218	.0217	.0217	.0216
354.00	.0216	.0215	.0215	.0214	.0213	.0213	.0212	.0212	.0211	.0211	.0210	.0209
357.00	.0209	.0208	.0208	.0207	.0207	.0206	.0205	.0205	.0204	.0204	.0203	.0203

SR - 85

HALF-LIFE 64.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
360.00	.0202	.0202	.0201	.0200	.0200	.0199	.0199	.0198	.0198	.0197	.0197	.0196
363.00	.0196	.0195	.0195	.0194	.0194	.0193	.0192	.0192	.0191	.0191	.0190	.0190
366.00	.0189	.0189	.0188	.0188	.0187	.0187	.0186	.0186	.0185	.0185	.0184	.0184
369.00	.0183	.0183	.0182	.0182	.0181	.0181	.0180	.0180	.0179	.0179	.0178	.0178
372.00	.0177	.0177	.0176	.0176	.0176	.0175	.0175	.0174	.0174	.0173	.0173	.0172
375.00	.0172	.0171	.0171	.0170	.0170	.0169	.0169	.0169	.0168	.0168	.0167	.0167
378.00	.0166	.0166	.0165	.0165	.0164	.0164	.0164	.0163	.0163	.0162	.0162	.0161
381.00	.0161	.0160	.0160	.0160	.0159	.0159	.0158	.0158	.0157	.0157	.0157	.0156
384.00	.0156	.0155	.0155	.0154	.0154	.0154	.0153	.0153	.0152	.0152	.0152	.0151
387.00	.0151	.0150	.0150	.0150	.0149	.0149	.0148	.0148	.0148	.0147	.0147	.0146
390.00	.0146	.0146	.0145	.0145	.0144	.0144	.0144	.0143	.0143	.0142	.0142	.0142
393.00	.0141	.0141	.0140	.0140	.0140	.0139	.0139	.0139	.0138	.0138	.0137	.0137
396.00	.0137	.0136	.0136	.0136	.0135	.0135	.0134	.0134	.0134	.0133	.0133	.0133
399.00	.0132	.0132	.0132	.0131	.0131	.0131	.0130	.0130	.0129	.0129	.0129	.0128
402.00	.0128	.0128	.0127	.0127	.0127	.0126	.0126	.0126	.0125	.0125	.0125	.0124
405.00	.0124	.0124	.0123	.0123	.0123	.0122	.0122	.0122	.0121	.0121	.0121	.0120
408.00	.0120	.0120	.0119	.0119	.0119	.0118	.0118	.0118	.0117	.0117	.0117	.0116
411.00	.0116	.0116	.0116	.0115	.0115	.0115	.0114	.0114	.0114	.0113	.0113	.0113
414.00	.0112	.0112	.0112	.0111	.0111	.0111	.0111	.0110	.0110	.0110	.0109	.0109
417.00	.0109	.0108	.0108	.0108	.0108	.0107	.0107	.0107	.0106	.0106	.0106	.0106
420.00	.0105	.0105	.0105	.0104	.0104	.0104	.0104	.0103	.0103	.0103	.0102	.0102
423.00	.0102	.0102	.0101	.0101	.0101	.0101	.0100	.0100	.0100	.0099	.0099	.0099

SR - 89

HALF-LIFE 50.40 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
0.00	1.0000	.9965	.9931	.9897	.9863	.9829	.9795	.9762	.9728	.9695	.9662	.9628
3.00	.9595	.9562	.9530	.9497	.9464	.9432	.9399	.9367	.9335	.9303	.9271	.9239
6.00	.9207	.9176	.9144	.9113	.9082	.9051	.9019	.8988	.8958	.8927	.8896	.8866
9.00	.8835	.8805	.8775	.8745	.8715	.8685	.8655	.8625	.8596	.8566	.8537	.8507
12.00	.8478	.8449	.8420	.8391	.8362	.8334	.8305	.8277	.8248	.8220	.8192	.8163
15.00	.8135	.8108	.8080	.8052	.8024	.7997	.7969	.7942	.7915	.7888	.7860	.7833
18.00	.7807	.7780	.7753	.7726	.7700	.7674	.7647	.7621	.7595	.7569	.7543	.7517
21.00	.7491	.7465	.7440	.7414	.7389	.7363	.7338	.7313	.7288	.7263	.7238	.7213
24.00	.7188	.7164	.7139	.7114	.7090	.7066	.7041	.7017	.6993	.6969	.6945	.6921
27.00	.6898	.6874	.6850	.6827	.6803	.6780	.6757	.6734	.6711	.6687	.6665	.6642
30.00	.6619	.6596	.6573	.6551	.6528	.6506	.6484	.6461	.6439	.6417	.6395	.6373
33.00	.6351	.6330	.6308	.6286	.6265	.6243	.6222	.6200	.6179	.6158	.6137	.6116
36.00	.6095	.6074	.6053	.6032	.6011	.5991	.5970	.5950	.5929	.5909	.5889	.5868
39.00	.5848	.5828	.5808	.5788	.5768	.5749	.5729	.5709	.5690	.5670	.5651	.5631
42.00	.5612	.5593	.5573	.5554	.5535	.5516	.5497	.5478	.5460	.5441	.5422	.5404
45.00	.5385	.5366	.5348	.5330	.5311	.5293	.5275	.5257	.5239	.5221	.5203	.5185
48.00	.5167	.5150	.5132	.5114	.5097	.5079	.5062	.5044	.5027	.5010	.4993	.4975
51.00	.4958	.4941	.4924	.4908	.4891	.4874	.4857	.4840	.4824	.4807	.4791	.4774
54.00	.4758	.4742	.4725	.4709	.4693	.4677	.4661	.4645	.4629	.4613	.4597	.4581
57.00	.4566	.4550	.4534	.4519	.4503	.4488	.4472	.4457	.4442	.4427	.4411	.4396
60.00	.4381	.4366	.4351	.4336	.4321	.4306	.4292	.4277	.4262	.4248	.4233	.4218
63.00	.4204	.4190	.4175	.4161	.4147	.4132	.4118	.4104	.4090	.4076	.4062	.4048
66.00	.4034	.4020	.4006	.3993	.3979	.3965	.3952	.3938	.3925	.3911	.3898	.3884
69.00	.3871	.3858	.3844	.3831	.3818	.3805	.3792	.3779	.3766	.3753	.3740	.3727
72.00	.3714	.3702	.3689	.3676	.3664	.3651	.3639	.3626	.3614	.3601	.3589	.3577
75.00	.3564	.3552	.3540	.3528	.3516	.3504	.3492	.3480	.3468	.3456	.3444	.3432
78.00	.3420	.3409	.3397	.3385	.3374	.3362	.3350	.3339	.3327	.3316	.3305	.3293
81.00	.3282	.3271	.3259	.3248	.3237	.3226	.3215	.3204	.3193	.3182	.3171	.3160
84.00	.3149	.3138	.3128	.3117	.3106	.3096	.3085	.3074	.3064	.3053	.3043	.3032
87.00	.3022	.3012	.3001	.2991	.2981	.2970	.2960	.2950	.2940	.2930	.2920	.2910
90.00	.2900	.2890	.2880	.2870	.2860	.2850	.2841	.2831	.2821	.2811	.2802	.2792
93.00	.2783	.2773	.2764	.2754	.2745	.2735	.2726	.2716	.2707	.2698	.2689	.2679
96.00	.2670	.2661	.2652	.2643	.2634	.2625	.2616	.2607	.2598	.2589	.2580	.2571
99.00	.2562	.2553	.2545	.2536	.2527	.2518	.2510	.2501	.2493	.2484	.2476	.2467
102.00	.2459	.2450	.2442	.2433	.2425	.2417	.2408	.2400	.2392	.2384	.2375	.2367
105.00	.2359	.2351	.2343	.2335	.2327	.2319	.2311	.2303	.2295	.2287	.2279	.2272
108.00	.2264	.2256	.2248	.2241	.2233	.2225	.2218	.2210	.2202	.2195	.2187	.2180
111.00	.2172	.2165	.2157	.2150	.2143	.2135	.2128	.2121	.2113	.2106	.2099	.2092
114.00	.2084	.2077	.2070	.2063	.2056	.2049	.2042	.2035	.2028	.2021	.2014	.2007
117.00	.2000	.1993	.1986	.1980	.1973	.1966	.1959	.1953	.1946	.1939	.1933	.1926

SR - 89

HALF-LIFE 50.40 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
120.00	.1919	.1913	.1906	.1900	.1893	.1887	.1880	.1874	.1867	.1861	.1854	.1848
123.00	.1842	.1835	.1829	.1823	.1817	.1810	.1804	.1798	.1792	.1786	.1779	.1773
126.00	.1767	.1761	.1755	.1749	.1743	.1737	.1731	.1725	.1719	.1713	.1708	.1702
129.00	.1696	.1690	.1684	.1678	.1673	.1667	.1661	.1655	.1650	.1644	.1638	.1633
132.00	.1627	.1622	.1616	.1611	.1605	.1600	.1594	.1589	.1583	.1578	.1572	.1567
135.00	.1561	.1556	.1551	.1545	.1540	.1535	.1530	.1524	.1519	.1514	.1509	.1503
138.00	.1498	.1493	.1488	.1483	.1478	.1473	.1468	.1463	.1458	.1453	.1448	.1443
141.00	.1438	.1433	.1428	.1423	.1418	.1413	.1408	.1404	.1399	.1394	.1389	.1384
144.00	.1380	.1375	.1370	.1365	.1361	.1356	.1351	.1347	.1342	.1338	.1333	.1328
147.00	.1324	.1319	.1315	.1310	.1306	.1301	.1297	.1292	.1288	.1283	.1279	.1275
150.00	.1270	.1266	.1262	.1257	.1253	.1249	.1244	.1240	.1236	.1232	.1227	.1223
153.00	.1219	.1215	.1211	.1206	.1202	.1198	.1194	.1190	.1186	.1182	.1178	.1174
156.00	.1170	.1166	.1162	.1158	.1154	.1150	.1146	.1142	.1138	.1134	.1130	.1126
159.00	.1122	.1118	.1115	.1111	.1107	.1103	.1099	.1096	.1092	.1088	.1084	.1081
162.00	.1077	.1073	.1070	.1066	.1062	.1059	.1055	.1051	.1048	.1044	.1041	.1037
165.00	.1033	.1030	.1026	.1023	.1019	.1016	.1012	.1009	.1005	.1002	.0998	.0995
168.00	.0992	.0988	.0985	.0981	.0978	.0975	.0971	.0968	.0965	.0961	.0958	.0955
171.00	.0952	.0948	.0945	.0942	.0939	.0935	.0932	.0929	.0926	.0923	.0919	.0916
174.00	.0913	.0910	.0907	.0904	.0901	.0897	.0894	.0891	.0888	.0885	.0882	.0879
177.00	.0876	.0873	.0870	.0867	.0864	.0861	.0858	.0855	.0852	.0849	.0846	.0844
180.00	.0841	.0838	.0835	.0832	.0829	.0826	.0824	.0821	.0818	.0815	.0812	.0809
183.00	.0807	.0804	.0801	.0798	.0796	.0793	.0790	.0787	.0785	.0782	.0779	.0777
186.00	.0774	.0771	.0769	.0766	.0763	.0761	.0758	.0756	.0753	.0750	.0748	.0745
189.00	.0743	.0740	.0738	.0735	.0733	.0730	.0728	.0725	.0723	.0720	.0718	.0715
192.00	.0713	.0710	.0708	.0705	.0703	.0701	.0698	.0696	.0693	.0691	.0689	.0686
195.00	.0684	.0682	.0679	.0677	.0675	.0672	.0670	.0668	.0665	.0663	.0661	.0658
198.00	.0656	.0654	.0652	.0649	.0647	.0645	.0643	.0641	.0638	.0636	.0634	.0632
201.00	.0630	.0628	.0625	.0623	.0621	.0619	.0617	.0615	.0613	.0610	.0608	.0606
204.00	.0604	.0602	.0600	.0598	.0596	.0594	.0592	.0590	.0588	.0586	.0584	.0582
207.00	.0580	.0578	.0576	.0574	.0572	.0570	.0568	.0566	.0564	.0562	.0560	.0558
210.00	.0556	.0554	.0552	.0551	.0549	.0547	.0545	.0543	.0541	.0539	.0537	.0536
213.00	.0534	.0532	.0530	.0528	.0527	.0525	.0523	.0521	.0519	.0518	.0516	.0514
216.00	.0512	.0510	.0509	.0507	.0505	.0503	.0502	.0500	.0498	.0497	.0495	.0493
219.00	.0491	.0490	.0488	.0486	.0485	.0483	.0481	.0480	.0478	.0476	.0475	.0473
222.00	.0472	.0470	.0468	.0467	.0465	.0464	.0462	.0460	.0459	.0457	.0456	.0454
225.00	.0453	.0451	.0449	.0448	.0446	.0445	.0443	.0442	.0440	.0439	.0437	.0436
228.00	.0434	.0433	.0431	.0430	.0428	.0427	.0425	.0424	.0422	.0421	.0420	.0418
231.00	.0417	.0415	.0414	.0412	.0411	.0410	.0408	.0407	.0405	.0404	.0403	.0401
234.00	.0400	.0398	.0397	.0396	.0394	.0393	.0392	.0390	.0389	.0388	.0386	.0385
237.00	.0384	.0382	.0381	.0380	.0378	.0377	.0376	.0374	.0373	.0372	.0371	.0369

SR - 89

HALF-LIFE 50.40 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
240.00	.0368	.0367	.0366	.0364	.0363	.0362	.0361	.0359	.0358	.0357	.0356	.0354
243.00	.0353	.0352	.0351	.0350	.0348	.0347	.0346	.0345	.0344	.0342	.0341	.0340
246.00	.0339	.0338	.0337	.0335	.0334	.0333	.0332	.0331	.0330	.0329	.0327	.0326
249.00	.0325	.0324	.0323	.0322	.0321	.0320	.0319	.0317	.0316	.0315	.0314	.0313
252.00	.0312	.0311	.0310	.0309	.0308	.0307	.0306	.0305	.0304	.0302	.0301	.0300
255.00	.0299	.0298	.0297	.0296	.0295	.0294	.0293	.0292	.0291	.0290	.0289	.0288
258.00	.0287	.0286	.0285	.0284	.0283	.0282	.0281	.0280	.0279	.0278	.0278	.0277
261.00	.0276	.0275	.0274	.0273	.0272	.0271	.0270	.0269	.0268	.0267	.0266	.0265
264.00	.0264	.0264	.0263	.0262	.0261	.0260	.0259	.0258	.0257	.0256	.0256	.0255
267.00	.0254	.0253	.0252	.0251	.0250	.0249	.0249	.0248	.0247	.0246	.0245	.0244
270.00	.0243	.0243	.0242	.0241	.0240	.0239	.0238	.0238	.0237	.0236	.0235	.0234
273.00	.0234	.0233	.0232	.0231	.0230	.0230	.0229	.0228	.0227	.0226	.0226	.0225
276.00	.0224	.0223	.0223	.0222	.0221	.0220	.0220	.0219	.0218	.0217	.0217	.0216
279.00	.0215	.0214	.0214	.0213	.0212	.0211	.0211	.0210	.0209	.0208	.0208	.0207
282.00	.0206	.0206	.0205	.0204	.0204	.0203	.0202	.0201	.0201	.0200	.0199	.0199
285.00	.0198	.0197	.0197	.0196	.0195	.0195	.0194	.0193	.0193	.0192	.0191	.0191
288.00	.0190	.0189	.0189	.0188	.0187	.0187	.0186	.0185	.0185	.0184	.0184	.0183
291.00	.0182	.0182	.0181	.0180	.0180	.0179	.0179	.0178	.0177	.0177	.0176	.0175
294.00	.0175	.0174	.0174	.0173	.0172	.0172	.0171	.0171	.0170	.0170	.0169	.0168
297.00	.0168	.0167	.0167	.0166	.0165	.0165	.0164	.0164	.0163	.0163	.0162	.0162
300.00	.0161	.0160	.0160	.0159	.0159	.0158	.0158	.0157	.0157	.0156	.0156	.0155
303.00	.0154	.0154	.0153	.0153	.0152	.0152	.0151	.0151	.0150	.0150	.0149	.0149
306.00	.0148	.0148	.0147	.0147	.0146	.0146	.0145	.0145	.0144	.0144	.0143	.0143
309.00	.0142	.0142	.0141	.0141	.0140	.0140	.0139	.0139	.0138	.0138	.0137	.0137
312.00	.0136	.0136	.0135	.0135	.0135	.0134	.0134	.0133	.0133	.0132	.0132	.0131
315.00	.0131	.0130	.0130	.0130	.0129	.0129	.0128	.0128	.0127	.0127	.0126	.0126
318.00	.0126	.0125	.0125	.0124	.0124	.0123	.0123	.0123	.0122	.0122	.0121	.0121
321.00	.0120	.0120	.0120	.0119	.0119	.0118	.0118	.0118	.0117	.0117	.0116	.0116
324.00	.0116	.0115	.0115	.0114	.0114	.0114	.0113	.0113	.0112	.0112	.0112	.0111
327.00	.0111	.0111	.0110	.0110	.0109	.0109	.0109	.0108	.0108	.0108	.0107	.0107
330.00	.0106	.0106	.0106	.0105	.0105	.0105	.0104	.0104	.0103	.0103	.0103	.0102
333.00	.0102	.0102	.0101	.0101	.0101	.0100	.0100	.0100	.0099	.0099	.0099	.0098

SR - 90

HALF-LIFE 28.00 YEARS CALCULATION INTERVAL 1.0 MONTHS

YEARS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
					MONTHS							
0.00	1.0000	.9979	.9958	.9938	.9917	.9897	.9876	.9856	.9836	.9816	.9795	.9775
1.00	.9755	.9735	.9715	.9695	.9675	.9655	.9635	.9615	.9595	.9576	.9556	.9536
2.00	.9516	.9497	.9477	.9458	.9438	.9419	.9399	.9380	.9361	.9341	.9322	.9303
3.00	.9284	.9265	.9246	.9226	.9207	.9188	.9170	.9151	.9132	.9113	.9094	.9075
4.00	.9057	.9038	.9019	.9001	.8982	.8964	.8945	.8927	.8908	.8890	.8872	.8854
5.00	.8835	.8817	.8799	.8781	.8763	.8745	.8727	.8709	.8691	.8673	.8655	.8637
6.00	.8619	.8601	.8584	.8566	.8548	.8531	.8513	.8496	.8478	.8461	.8443	.8426
7.00	.8408	.8391	.8374	.8357	.8339	.8322	.8305	.8288	.8271	.8254	.8237	.8220
8.00	.8203	.8186	.8169	.8152	.8135	.8119	.8102	.8085	.8069	.8052	.8035	.8019
9.00	.8002	.7986	.7969	.7953	.7937	.7920	.7904	.7888	.7871	.7855	.7839	.7823
10.00	.7807	.7791	.7774	.7758	.7742	.7726	.7711	.7695	.7679	.7663	.7647	.7631
11.00	.7616	.7600	.7584	.7569	.7553	.7538	.7522	.7507	.7491	.7476	.7460	.7445
12.00	.7429	.7414	.7399	.7384	.7368	.7353	.7338	.7323	.7308	.7293	.7278	.7263
13.00	.7248	.7233	.7218	.7203	.7188	.7173	.7159	.7144	.7129	.7114	.7100	.7085
14.00	.7071	.7056	.7041	.7027	.7012	.6998	.6984	.6969	.6955	.6940	.6926	.6912
15.00	.6898	.6883	.6869	.6855	.6841	.6827	.6813	.6799	.6785	.6771	.6757	.6743
16.00	.6729	.6715	.6701	.6687	.6674	.6660	.6646	.6633	.6619	.6605	.6592	.6578
17.00	.6564	.6551	.6537	.6524	.6511	.6497	.6484	.6470	.6457	.6444	.6430	.6417
18.00	.6404	.6391	.6378	.6364	.6351	.6338	.6325	.6312	.6299	.6286	.6273	.6260
19.00	.6247	.6234	.6222	.6209	.6196	.6183	.6170	.6158	.6145	.6132	.6120	.6107
20.00	.6095	.6082	.6069	.6057	.6044	.6032	.6020	.6007	.5995	.5982	.5970	.5958
21.00	.5946	.5933	.5921	.5909	.5897	.5885	.5872	.5860	.5848	.5836	.5824	.5812
22.00	.5800	.5788	.5776	.5764	.5752	.5741	.5729	.5717	.5705	.5693	.5682	.5670
23.00	.5658	.5647	.5635	.5623	.5612	.5600	.5589	.5577	.5566	.5554	.5543	.5531
24.00	.5520	.5509	.5497	.5486	.5475	.5463	.5452	.5441	.5430	.5418	.5407	.5396
25.00	.5385	.5374	.5363	.5352	.5341	.5330	.5319	.5308	.5297	.5286	.5275	.5264
26.00	.5253	.5242	.5232	.5221	.5210	.5199	.5189	.5178	.5167	.5157	.5146	.5135
27.00	.5125	.5114	.5104	.5093	.5083	.5072	.5062	.5051	.5041	.5031	.5020	.5010
28.00	.5000	.4989	.4979	.4969	.4958	.4948	.4938	.4928	.4918	.4908	.4897	.4887
29.00	.4877	.4867	.4857	.4847	.4837	.4827	.4817	.4807	.4797	.4788	.4778	.4768
30.00	.4758	.4748	.4738	.4729	.4719	.4709	.4699	.4690	.4680	.4670	.4661	.4651
31.00	.4642	.4632	.4623	.4613	.4603	.4594	.4585	.4575	.4566	.4556	.4547	.4537
32.00	.4528	.4519	.4509	.4500	.4491	.4482	.4472	.4463	.4454	.4445	.4436	.4427
33.00	.4417	.4408	.4399	.4390	.4381	.4372	.4363	.4354	.4345	.4336	.4327	.4318
34.00	.4309	.4300	.4292	.4283	.4274	.4265	.4256	.4248	.4239	.4230	.4221	.4213
35.00	.4204	.4195	.4187	.4178	.4169	.4161	.4152	.4144	.4135	.4127	.4118	.4110
36.00	.4101	.4093	.4084	.4076	.4067	.4059	.4051	.4042	.4034	.4026	.4017	.4009
37.00	.4001	.3993	.3984	.3976	.3968	.3960	.3952	.3944	.3935	.3927	.3919	.3911
38.00	.3903	.3895	.3887	.3879	.3871	.3863	.3855	.3847	.3839	.3831	.3823	.3815
39.00	.3808	.3800	.3792	.3784	.3776	.3769	.3761	.3753	.3745	.3738	.3730	.3722

SR - 90

HALF-LIFE 28.00 YEARS CALCULATION INTERVAL 1.0 MONTHS

YEARS	MONTHS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
40.00	.3714	.3707	.3699	.3692	.3684	.3676	.3669	.3661	.3654	.3646	.3639	.3631
41.00	.3624	.3616	.3609	.3601	.3594	.3586	.3579	.3572	.3564	.3557	.3550	.3542
42.00	.3535	.3528	.3520	.3513	.3506	.3499	.3492	.3484	.3477	.3470	.3463	.3456
43.00	.3449	.3441	.3434	.3427	.3420	.3413	.3406	.3399	.3392	.3385	.3378	.3371
44.00	.3364	.3357	.3350	.3344	.3337	.3330	.3323	.3316	.3309	.3302	.3296	.3289
45.00	.3282	.3275	.3268	.3262	.3255	.3248	.3242	.3235	.3228	.3222	.3215	.3208
46.00	.3202	.3195	.3189	.3182	.3175	.3169	.3162	.3156	.3149	.3143	.3136	.3130
47.00	.3123	.3117	.3111	.3104	.3098	.3091	.3085	.3079	.3072	.3066	.3060	.3053
48.00	.3047	.3041	.3034	.3028	.3022	.3016	.3010	.3003	.2997	.2991	.2985	.2979
49.00	.2973	.2966	.2960	.2954	.2948	.2942	.2936	.2930	.2924	.2918	.2912	.2906
50.00	.2900	.2894	.2888	.2882	.2876	.2870	.2864	.2858	.2852	.2846	.2841	.2835
51.00	.2829	.2823	.2817	.2811	.2806	.2800	.2794	.2788	.2783	.2777	.2771	.2765
52.00	.2760	.2754	.2748	.2743	.2737	.2731	.2726	.2720	.2715	.2709	.2703	.2698
53.00	.2692	.2687	.2681	.2676	.2670	.2665	.2659	.2654	.2648	.2643	.2637	.2632
54.00	.2626	.2621	.2616	.2610	.2605	.2599	.2594	.2589	.2583	.2578	.2573	.2567
55.00	.2562	.2557	.2552	.2546	.2541	.2536	.2531	.2525	.2520	.2515	.2510	.2505
56.00	.2500	.2494	.2489	.2484	.2479	.2474	.2469	.2464	.2459	.2454	.2448	.2443
57.00	.2438	.2433	.2428	.2423	.2418	.2413	.2408	.2403	.2398	.2394	.2389	.2384
58.00	.2379	.2374	.2369	.2364	.2359	.2354	.2349	.2345	.2340	.2335	.2330	.2325
59.00	.2321	.2316	.2311	.2306	.2301	.2297	.2292	.2287	.2283	.2278	.2273	.2268
60.00	.2264	.2259	.2254	.2250	.2245	.2241	.2236	.2231	.2227	.2222	.2218	.2213
61.00	.2208	.2204	.2199	.2195	.2190	.2186	.2181	.2177	.2172	.2168	.2163	.2159
62.00	.2154	.2150	.2146	.2141	.2137	.2132	.2128	.2124	.2119	.2115	.2110	.2106
63.00	.2102	.2097	.2093	.2089	.2084	.2080	.2076	.2072	.2067	.2063	.2059	.2055
64.00	.2050	.2046	.2042	.2038	.2033	.2029	.2025	.2021	.2017	.2013	.2008	.2004
65.00	.2000	.1996	.1992	.1988	.1984	.1980	.1976	.1972	.1967	.1963	.1959	.1955
66.00	.1951	.1947	.1943	.1939	.1935	.1931	.1927	.1923	.1919	.1915	.1911	.1907
67.00	.1904	.1900	.1896	.1892	.1888	.1884	.1880	.1876	.1872	.1869	.1865	.1861
68.00	.1857	.1853	.1849	.1846	.1842	.1838	.1834	.1830	.1827	.1823	.1819	.1815
69.00	.1812	.1808	.1804	.1800	.1797	.1793	.1789	.1786	.1782	.1778	.1775	.1771
70.00	.1767	.1764	.1760	.1756	.1753	.1749	.1746	.1742	.1738	.1735	.1731	.1728
71.00	.1724	.1720	.1717	.1713	.1710	.1706	.1703	.1699	.1696	.1692	.1689	.1685
72.00	.1682	.1678	.1675	.1672	.1668	.1665	.1661	.1658	.1654	.1651	.1648	.1644
73.00	.1641	.1637	.1634	.1631	.1627	.1624	.1621	.1617	.1614	.1611	.1607	.1604
74.00	.1601	.1597	.1594	.1591	.1587	.1584	.1581	.1578	.1574	.1571	.1568	.1565
75.00	.1561	.1558	.1555	.1552	.1549	.1545	.1542	.1539	.1536	.1533	.1530	.1526
76.00	.1523	.1520	.1517	.1514	.1511	.1508	.1505	.1501	.1498	.1495	.1492	.1489
77.00	.1486	.1483	.1480	.1477	.1474	.1471	.1468	.1465	.1462	.1459	.1456	.1453
78.00	.1450	.1447	.1444	.1441	.1438	.1435	.1432	.1429	.1426	.1423	.1420	.1417
79.00	.1414	.1411	.1408	.1405	.1403	.1400	.1397	.1394	.1391	.1388	.1385	.1382

SR - 90

HALF-LIFE 28.00 YEARS CALCULATION INTERVAL 1.0 MONTHS

YEARS	MONTHS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
80.00	.1380	.1377	.1374	.1371	.1368	.1365	.1363	.1360	.1357	.1354	.1351	.1349
81.00	.1346	.1343	.1340	.1338	.1335	.1332	.1329	.1327	.1324	.1321	.1318	.1316
82.00	.1313	.1310	.1308	.1305	.1302	.1299	.1297	.1294	.1291	.1289	.1286	.1283
83.00	.1281	.1278	.1276	.1273	.1270	.1268	.1265	.1262	.1260	.1257	.1255	.1252
84.00	.1250	.1247	.1244	.1242	.1239	.1237	.1234	.1232	.1229	.1227	.1224	.1221
85.00	.1219	.1216	.1214	.1211	.1209	.1206	.1204	.1201	.1199	.1197	.1194	.1192
86.00	.1189	.1187	.1184	.1182	.1179	.1177	.1174	.1172	.1170	.1167	.1165	.1162
87.00	.1160	.1158	.1155	.1153	.1151	.1148	.1146	.1143	.1141	.1139	.1136	.1134
88.00	.1132	.1129	.1127	.1125	.1122	.1120	.1118	.1115	.1113	.1111	.1109	.1106
89.00	.1104	.1102	.1099	.1097	.1095	.1093	.1090	.1088	.1086	.1084	.1081	.1079
90.00	.1077	.1075	.1073	.1070	.1068	.1066	.1064	.1062	.1059	.1057	.1055	.1053
91.00	.1051	.1048	.1046	.1044	.1042	.1040	.1038	.1036	.1033	.1031	.1029	.1027
92.00	.1025	.1023	.1021	.1019	.1017	.1014	.1012	.1010	.1008	.1006	.1004	.1002
93.00	.1000	.0998	.0996	.0994	.0992	.0990	.0988	.0986	.0983	.0981	.0979	.0977

S - 35

HALF-LIFE 86.70 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
0.00	1.0000	.9973	.9946	.9920	.9893	.9867	.9841	.9815	.9789	.9763	.9737	.9711
4.00	.9685	.9659	.9633	.9608	.9582	.9557	.9531	.9506	.9480	.9455	.9430	.9405
8.00	.9380	.9355	.9330	.9305	.9280	.9256	.9231	.9207	.9182	.9158	.9133	.9109
12.00	.9085	.9061	.9036	.9012	.8988	.8964	.8941	.8917	.8893	.8869	.8846	.8822
16.00	.8799	.8775	.8752	.8729	.8705	.8682	.8659	.8636	.8613	.8590	.8567	.8545
20.00	.8522	.8499	.8477	.8454	.8431	.8409	.8387	.8364	.8342	.8320	.8298	.8276
24.00	.8254	.8232	.8210	.8188	.8166	.8144	.8123	.8101	.8079	.8058	.8037	.8015
28.00	.7994	.7973	.7951	.7930	.7909	.7888	.7867	.7846	.7825	.7804	.7784	.7763
32.00	.7742	.7722	.7701	.7681	.7660	.7640	.7619	.7599	.7579	.7559	.7539	.7519
36.00	.7499	.7479	.7459	.7439	.7419	.7399	.7380	.7360	.7340	.7321	.7301	.7282
40.00	.7263	.7243	.7224	.7205	.7185	.7166	.7147	.7128	.7109	.7090	.7072	.7053
44.00	.7034	.7015	.6997	.6978	.6959	.6941	.6922	.6904	.6886	.6867	.6849	.6831
48.00	.6813	.6794	.6776	.6758	.6740	.6722	.6704	.6687	.6669	.6651	.6633	.6616
52.00	.6598	.6581	.6563	.6546	.6528	.6511	.6493	.6476	.6459	.6442	.6425	.6407
56.00	.6390	.6373	.6356	.6340	.6323	.6306	.6289	.6272	.6256	.6239	.6222	.6206
60.00	.6189	.6173	.6156	.6140	.6124	.6107	.6091	.6075	.6059	.6043	.6027	.6010
64.00	.5994	.5979	.5963	.5947	.5931	.5915	.5899	.5884	.5868	.5852	.5837	.5821
68.00	.5806	.5790	.5775	.5760	.5744	.5729	.5714	.5698	.5683	.5668	.5653	.5638
72.00	.5623	.5608	.5593	.5578	.5563	.5549	.5534	.5519	.5504	.5490	.5475	.5461
76.00	.5446	.5432	.5417	.5403	.5388	.5374	.5360	.5345	.5331	.5317	.5303	.5289
80.00	.5275	.5261	.5247	.5233	.5219	.5205	.5191	.5177	.5163	.5150	.5136	.5122
84.00	.5109	.5095	.5081	.5068	.5054	.5041	.5028	.5014	.5001	.4988	.4974	.4961
88.00	.4948	.4935	.4922	.4908	.4895	.4882	.4869	.4856	.4843	.4831	.4818	.4805
92.00	.4792	.4779	.4767	.4754	.4741	.4729	.4716	.4703	.4691	.4678	.4666	.4654
96.00	.4641	.4629	.4617	.4604	.4592	.4580	.4568	.4555	.4543	.4531	.4519	.4507
100.00	.4495	.4483	.4471	.4459	.4447	.4436	.4424	.4412	.4400	.4389	.4377	.4365
104.00	.4354	.4342	.4331	.4319	.4307	.4296	.4285	.4273	.4262	.4250	.4239	.4228
108.00	.4217	.4205	.4194	.4183	.4172	.4161	.4150	.4139	.4128	.4117	.4106	.4095
112.00	.4084	.4073	.4062	.4051	.4041	.4030	.4019	.4008	.3998	.3987	.3976	.3966
116.00	.3955	.3945	.3934	.3924	.3913	.3903	.3893	.3882	.3872	.3862	.3851	.3841
120.00	.3831	.3821	.3810	.3800	.3790	.3780	.3770	.3760	.3750	.3740	.3730	.3720
124.00	.3710	.3700	.3691	.3681	.3671	.3661	.3651	.3642	.3632	.3622	.3613	.3603
128.00	.3593	.3584	.3574	.3565	.3555	.3546	.3536	.3527	.3518	.3508	.3499	.3490
132.00	.3480	.3471	.3462	.3453	.3443	.3434	.3425	.3416	.3407	.3398	.3389	.3380
136.00	.3371	.3362	.3353	.3344	.3335	.3326	.3317	.3308	.3300	.3291	.3282	.3273
140.00	.3265	.3256	.3247	.3239	.3230	.3221	.3213	.3204	.3196	.3187	.3179	.3170
144.00	.3162	.3154	.3145	.3137	.3128	.3120	.3112	.3103	.3095	.3087	.3079	.3071
148.00	.3062	.3054	.3046	.3038	.3030	.3022	.3014	.3006	.2998	.2990	.2982	.2974
152.00	.2966	.2958	.2950	.2942	.2935	.2927	.2919	.2911	.2903	.2896	.2888	.2880
156.00	.2873	.2865	.2857	.2850	.2842	.2835	.2827	.2820	.2812	.2805	.2797	.2790

S - 35

HALF-LIFE 86.70 DAYS CALCULATION INTERVAL 8.0 HOURS

DAYS	HOURS 0.0	8.0	16.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0	88.0
160.00	.2782	.2775	.2767	.2760	.2753	.2745	.2738	.2731	.2724	.2716	.2709	.2702
164.00	.2695	.2687	.2680	.2673	.2666	.2659	.2652	.2645	.2638	.2631	.2624	.2617
168.00	.2610	.2603	.2596	.2589	.2582	.2575	.2568	.2562	.2555	.2548	.2541	.2534
172.00	.2528	.2521	.2514	.2508	.2501	.2494	.2488	.2481	.2474	.2468	.2461	.2455
176.00	.2448	.2442	.2435	.2429	.2422	.2416	.2409	.2403	.2396	.2390	.2384	.2377
180.00	.2371	.2365	.2358	.2352	.2346	.2340	.2333	.2327	.2321	.2315	.2309	.2303
184.00	.2296	.2290	.2284	.2278	.2272	.2266	.2260	.2254	.2248	.2242	.2236	.2230
188.00	.2224	.2218	.2212	.2206	.2201	.2195	.2189	.2183	.2177	.2171	.2166	.2160
192.00	.2154	.2148	.2143	.2137	.2131	.2126	.2120	.2114	.2109	.2103	.2097	.2092
196.00	.2086	.2081	.2075	.2070	.2064	.2059	.2053	.2048	.2042	.2037	.2031	.2026
200.00	.2021	.2015	.2010	.2004	.1999	.1994	.1989	.1983	.1978	.1973	.1967	.1962
204.00	.1957	.1952	.1947	.1941	.1936	.1931	.1926	.1921	.1916	.1911	.1906	.1900
208.00	.1895	.1890	.1885	.1880	.1875	.1870	.1865	.1860	.1855	.1850	.1846	.1841
212.00	.1836	.1831	.1826	.1821	.1816	.1811	.1807	.1802	.1797	.1792	.1787	.1783
216.00	.1778	.1773	.1768	.1764	.1759	.1754	.1750	.1745	.1740	.1736	.1731	.1727
220.00	.1722	.1717	.1713	.1708	.1704	.1699	.1695	.1690	.1686	.1681	.1677	.1672
224.00	.1668	.1663	.1659	.1654	.1650	.1646	.1641	.1637	.1633	.1628	.1624	.1620
228.00	.1615	.1611	.1607	.1602	.1598	.1594	.1590	.1585	.1581	.1577	.1573	.1569
232.00	.1564	.1560	.1556	.1552	.1548	.1544	.1540	.1535	.1531	.1527	.1523	.1519
236.00	.1515	.1511	.1507	.1503	.1499	.1495	.1491	.1487	.1483	.1479	.1475	.1471
240.00	.1467	.1464	.1460	.1456	.1452	.1448	.1444	.1440	.1436	.1433	.1429	.1425
244.00	.1421	.1417	.1414	.1410	.1406	.1402	.1399	.1395	.1391	.1388	.1384	.1380
248.00	.1376	.1373	.1369	.1366	.1362	.1358	.1355	.1351	.1347	.1344	.1340	.1337
252.00	.1333	.1330	.1326	.1323	.1319	.1315	.1312	.1308	.1305	.1302	.1298	.1295
256.00	.1291	.1288	.1284	.1281	.1277	.1274	.1271	.1267	.1264	.1261	.1257	.1254
260.00	.1251	.1247	.1244	.1241	.1237	.1234	.1231	.1227	.1224	.1221	.1218	.1214
264.00	.1211	.1208	.1205	.1201	.1198	.1195	.1192	.1189	.1186	.1182	.1179	.1176
268.00	.1173	.1170	.1167	.1164	.1161	.1157	.1154	.1151	.1148	.1145	.1142	.1139
272.00	.1136	.1133	.1130	.1127	.1124	.1121	.1118	.1115	.1112	.1109	.1106	.1103
276.00	.1100	.1097	.1094	.1092	.1089	.1086	.1083	.1080	.1077	.1074	.1071	.1069
280.00	.1066	.1063	.1060	.1057	.1054	.1052	.1049	.1046	.1043	.1040	.1038	.1035
284.00	.1032	.1029	.1027	.1024	.1021	.1018	.1016	.1013	.1010	.1008	.1005	.1002
288.00	.1000	.0997	.0994	.0992	.0989	.0986	.0984	.0981	.0979	.0976	.0973	.0971

TF - 131

HALF-LIFE 25.00 MINUTES CALCULATION INTERVAL .5 MINUTES

MINUTES	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
0.0	1.0000	.9862	.9726	.9592	.9460	.9330	.9201	.9075	.8950	.8827
5.0	.8705	.8585	.8467	.8350	.8235	.8122	.8010	.7900	.7791	.7684
10.0	.7578	.7474	.7371	.7269	.7169	.7071	.6973	.6877	.6783	.6689
15.0	.6597	.6506	.6417	.6328	.6241	.6155	.6070	.5987	.5904	.5823
20.0	.5743	.5664	.5586	.5509	.5433	.5358	.5285	.5212	.5140	.5069
25.0	.5000	.4931	.4863	.4796	.4730	.4665	.4600	.4537	.4475	.4413
30.0	.4352	.4292	.4233	.4175	.4117	.4061	.4005	.3950	.3895	.3842
35.0	.3789	.3737	.3685	.3634	.3584	.3535	.3486	.3438	.3391	.3344
40.0	.3298	.3253	.3208	.3164	.3120	.3077	.3035	.2993	.2952	.2911
45.0	.2871	.2832	.2793	.2754	.2716	.2679	.2642	.2606	.2570	.2534
50.0	.2500	.2465	.2431	.2398	.2365	.2332	.2300	.2268	.2237	.2206
55.0	.2176	.2146	.2116	.2087	.2058	.2030	.2002	.1975	.1947	.1921
60.0	.1894	.1868	.1842	.1817	.1792	.1767	.1743	.1719	.1695	.1672
65.0	.1649	.1626	.1604	.1582	.1560	.1538	.1517	.1496	.1476	.1455
70.0	.1435	.1416	.1396	.1377	.1358	.1339	.1321	.1303	.1285	.1267
75.0	.1250	.1232	.1215	.1199	.1182	.1166	.1150	.1134	.1118	.1103
80.0	.1088	.1073	.1058	.1043	.1029	.1015	.1001	.0987	.0973	.0960

TE = 132

HALF-LIFE 78.00 HOURS CALCULATION INTERVAL .5 HOURS

HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
0.0	1.0000	.9955	.9911	.9867	.9823	.9780	.9736	.9693	.9650	.9607
5.0	.9565	.9522	.9480	.9438	.9396	.9355	.9313	.9272	.9231	.9190
10.0	.9149	.9109	.9068	.9028	.8988	.8948	.8908	.8869	.8830	.8791
15.0	.8752	.8713	.8674	.8636	.8597	.8559	.8521	.8484	.8446	.8408
20.0	.8371	.8334	.8297	.8260	.8224	.8187	.8151	.8115	.8079	.8043
25.0	.8007	.7972	.7937	.7901	.7866	.7831	.7797	.7762	.7728	.7693
30.0	.7659	.7625	.7592	.7558	.7524	.7491	.7458	.7425	.7392	.7359
35.0	.7326	.7294	.7262	.7229	.7197	.7165	.7134	.7102	.7071	.7039
40.0	.7008	.6977	.6946	.6915	.6885	.6854	.6824	.6793	.6763	.6733
45.0	.6703	.6674	.6644	.6615	.6585	.6556	.6527	.6498	.6469	.6441
50.0	.6412	.6384	.6355	.6327	.6299	.6271	.6243	.6216	.6188	.6161
55.0	.6133	.6106	.6079	.6052	.6025	.5999	.5972	.5946	.5919	.5893
60.0	.5867	.5841	.5815	.5789	.5763	.5738	.5712	.5687	.5662	.5637
65.0	.5612	.5587	.5562	.5537	.5513	.5489	.5464	.5440	.5416	.5392
70.0	.5368	.5344	.5320	.5297	.5273	.5250	.5227	.5203	.5180	.5157
75.0	.5135	.5112	.5089	.5067	.5044	.5022	.5000	.4977	.4955	.4933
80.0	.4911	.4890	.4868	.4846	.4825	.4803	.4782	.4761	.4740	.4719
85.0	.4698	.4677	.4656	.4636	.4615	.4595	.4574	.4554	.4534	.4514
90.0	.4494	.4474	.4454	.4434	.4415	.4395	.4376	.4356	.4337	.4318
95.0	.4298	.4279	.4260	.4242	.4223	.4204	.4185	.4167	.4148	.4130
100.0	.4112	.4093	.4075	.4057	.4039	.4021	.4003	.3986	.3968	.3950
105.0	.3933	.3915	.3898	.3881	.3864	.3846	.3829	.3812	.3796	.3779
110.0	.3762	.3745	.3729	.3712	.3696	.3679	.3663	.3647	.3631	.3614
115.0	.3598	.3582	.3567	.3551	.3535	.3519	.3504	.3488	.3473	.3457
120.0	.3442	.3427	.3412	.3396	.3381	.3366	.3351	.3337	.3322	.3307
125.0	.3292	.3278	.3263	.3249	.3234	.3220	.3206	.3192	.3177	.3163
130.0	.3149	.3135	.3121	.3108	.3094	.3080	.3066	.3053	.3039	.3026
135.0	.3012	.2999	.2986	.2973	.2959	.2946	.2933	.2920	.2907	.2894
140.0	.2881	.2869	.2856	.2843	.2831	.2818	.2806	.2793	.2781	.2768
145.0	.2756	.2744	.2732	.2720	.2708	.2696	.2684	.2672	.2660	.2648
150.0	.2636	.2625	.2613	.2601	.2590	.2578	.2567	.2556	.2544	.2533
155.0	.2522	.2511	.2500	.2488	.2477	.2466	.2455	.2445	.2434	.2423
160.0	.2412	.2401	.2391	.2380	.2370	.2359	.2349	.2338	.2328	.2318
165.0	.2307	.2297	.2287	.2277	.2267	.2257	.2247	.2237	.2227	.2217
170.0	.2207	.2197	.2188	.2178	.2168	.2159	.2149	.2139	.2130	.2121
175.0	.2111	.2102	.2092	.2083	.2074	.2065	.2056	.2046	.2037	.2028
180.0	.2019	.2010	.2001	.1993	.1984	.1975	.1966	.1957	.1949	.1940
185.0	.1932	.1923	.1914	.1906	.1898	.1889	.1881	.1872	.1864	.1856
190.0	.1848	.1839	.1831	.1823	.1815	.1807	.1799	.1791	.1783	.1775
195.0	.1767	.1759	.1752	.1744	.1736	.1728	.1721	.1713	.1706	.1698

TE - 132

HALF-LIFE 78.00 HOURS CALCULATION INTERVAL .5 HOURS

HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
200.0	.1690	.1683	.1675	.1668	.1661	.1653	.1646	.1639	.1631	.1624
205.0	.1617	.1610	.1603	.1596	.1588	.1581	.1574	.1567	.1560	.1554
210.0	.1547	.1540	.1533	.1526	.1519	.1513	.1506	.1499	.1493	.1486
215.0	.1479	.1473	.1466	.1460	.1453	.1447	.1440	.1434	.1428	.1421
220.0	.1415	.1409	.1403	.1396	.1390	.1384	.1378	.1372	.1366	.1360
225.0	.1354	.1348	.1342	.1336	.1330	.1324	.1318	.1312	.1306	.1300
230.0	.1295	.1289	.1283	.1278	.1272	.1266	.1261	.1255	.1250	.1244
235.0	.1238	.1233	.1227	.1222	.1217	.1211	.1206	.1200	.1195	.1190
240.0	.1185	.1179	.1174	.1169	.1164	.1159	.1153	.1148	.1143	.1138
245.0	.1133	.1128	.1123	.1118	.1113	.1108	.1103	.1098	.1094	.1089
250.0	.1084	.1079	.1074	.1069	.1065	.1060	.1055	.1051	.1046	.1041
255.0	.1037	.1032	.1028	.1023	.1018	.1014	.1009	.1005	.1000	.0996

TL = 204

HALF-LIFE 3.90 YEARS CALCULATION INTERVAL 15.0 DAYS

DAYS	0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0
0.0	1.0000	.9927	.9854	.9783	.9712	.9641	.9571	.9501	.9432	.9363
150.0	.9295	.9227	.9160	.9094	.9027	.8962	.8897	.8832	.8768	.8704
300.0	.8640	.8578	.8515	.8453	.8392	.8331	.8270	.8210	.8150	.8091
450.0	.8032	.7973	.7915	.7858	.7800	.7744	.7687	.7631	.7576	.7521
600.0	.7466	.7412	.7358	.7304	.7251	.7198	.7146	.7094	.7042	.6991
750.0	.6940	.6890	.6839	.6790	.6740	.6691	.6642	.6594	.6546	.6499
900.0	.6451	.6404	.6358	.6311	.6265	.6220	.6175	.6130	.6085	.6041
1050.0	.5997	.5953	.5910	.5867	.5824	.5782	.5740	.5698	.5656	.5615
1200.0	.5574	.5534	.5494	.5454	.5414	.5374	.5335	.5296	.5258	.5220
1350.0	.5182	.5144	.5107	.5069	.5032	.4996	.4959	.4923	.4888	.4852
1500.0	.4817	.4782	.4747	.4712	.4678	.4644	.4610	.4577	.4543	.4510
1650.0	.4477	.4445	.4412	.4380	.4348	.4317	.4285	.4254	.4223	.4192
1800.0	.4162	.4132	.4102	.4072	.4042	.4013	.3983	.3955	.3926	.3897
1950.0	.3869	.3841	.3813	.3785	.3757	.3730	.3703	.3676	.3649	.3623
2100.0	.3596	.3570	.3544	.3518	.3493	.3467	.3442	.3417	.3392	.3367
2250.0	.3343	.3319	.3294	.3270	.3247	.3223	.3200	.3176	.3153	.3130
2400.0	.3107	.3085	.3062	.3040	.3018	.2996	.2974	.2953	.2931	.2910
2550.0	.2889	.2867	.2847	.2826	.2805	.2785	.2765	.2745	.2725	.2705
2700.0	.2685	.2665	.2646	.2627	.2608	.2589	.2570	.2551	.2533	.2514
2850.0	.2496	.2478	.2460	.2442	.2424	.2406	.2389	.2371	.2354	.2337
3000.0	.2320	.2303	.2286	.2270	.2253	.2237	.2221	.2204	.2188	.2172
3150.0	.2157	.2141	.2125	.2110	.2094	.2079	.2064	.2049	.2034	.2019
3300.0	.2005	.1990	.1976	.1961	.1947	.1933	.1919	.1905	.1891	.1877
3450.0	.1863	.1850	.1836	.1823	.1810	.1797	.1783	.1771	.1758	.1745
3600.0	.1732	.1720	.1707	.1695	.1682	.1670	.1658	.1646	.1634	.1622
3750.0	.1610	.1598	.1587	.1575	.1564	.1552	.1541	.1530	.1519	.1508
3900.0	.1497	.1486	.1475	.1464	.1454	.1443	.1432	.1422	.1412	.1401
4050.0	.1391	.1381	.1371	.1361	.1351	.1341	.1332	.1322	.1312	.1303
4200.0	.1293	.1284	.1274	.1265	.1256	.1247	.1238	.1229	.1220	.1211
4350.0	.1202	.1193	.1185	.1176	.1167	.1159	.1150	.1142	.1134	.1126
4500.0	.1117	.1109	.1101	.1093	.1085	.1077	.1069	.1062	.1054	.1046
4650.0	.1039	.1031	.1024	.1016	.1009	.1001	.0994	.0987	.0980	.0973

TL - 206

HALF-LIFE 4.20 MINUTES CALCULATION INTERVAL 2.0 SECONDS

MINUTES	SECONDS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
0.00	1.0000	.9945	.9890	.9836	.9782	.9728	.9675	.9622	.9569	.9516	.9464	.9412
.40	.9361	.9309	.9258	.9207	.9157	.9107	.9057	.9007	.8958	.8908	.8860	.8811
.80	.8763	.8715	.8667	.8619	.8572	.8525	.8478	.8432	.8385	.8339	.8294	.8248
1.20	.8203	.8158	.8113	.8069	.8024	.7980	.7937	.7893	.7850	.7807	.7764	.7721
1.60	.7679	.7637	.7595	.7553	.7512	.7470	.7429	.7389	.7348	.7308	.7268	.7228
2.00	.7188	.7149	.7110	.7071	.7032	.6993	.6955	.6917	.6879	.6841	.6803	.6766
2.40	.6729	.6692	.6655	.6619	.6583	.6546	.6511	.6475	.6439	.6404	.6369	.6334
2.80	.6299	.6265	.6230	.6196	.6162	.6128	.6095	.6061	.6028	.5995	.5962	.5929
3.20	.5897	.5864	.5832	.5800	.5768	.5737	.5705	.5674	.5643	.5612	.5581	.5550
3.60	.5520	.5490	.5460	.5430	.5400	.5370	.5341	.5311	.5282	.5253	.5224	.5196
4.00	.5167	.5139	.5111	.5083	.5055	.5027	.5000	.4972	.4945	.4918	.4891	.4864
4.40	.4837	.4811	.4784	.4758	.4732	.4706	.4680	.4654	.4629	.4603	.4578	.4553
4.80	.4528	.4503	.4479	.4454	.4430	.4405	.4381	.4357	.4333	.4309	.4286	.4262
5.20	.4239	.4216	.4192	.4169	.4147	.4124	.4101	.4079	.4056	.4034	.4012	.3990
5.60	.3968	.3946	.3925	.3903	.3882	.3860	.3839	.3818	.3797	.3776	.3756	.3735
6.00	.3714	.3694	.3674	.3654	.3634	.3614	.3594	.3574	.3555	.3535	.3516	.3496
6.40	.3477	.3458	.3439	.3420	.3401	.3383	.3364	.3346	.3327	.3309	.3291	.3273
6.80	.3255	.3237	.3219	.3202	.3184	.3167	.3149	.3132	.3115	.3098	.3081	.3064
7.20	.3047	.3030	.3014	.2997	.2981	.2964	.2948	.2932	.2916	.2900	.2884	.2868
7.60	.2852	.2837	.2821	.2806	.2790	.2775	.2760	.2745	.2730	.2715	.2700	.2685
8.00	.2670	.2655	.2641	.2626	.2612	.2598	.2583	.2569	.2555	.2541	.2527	.2513
8.40	.2500	.2486	.2472	.2459	.2445	.2432	.2418	.2405	.2392	.2379	.2366	.2353
8.80	.2340	.2327	.2314	.2301	.2289	.2276	.2264	.2251	.2239	.2227	.2215	.2202
9.20	.2190	.2178	.2166	.2154	.2143	.2131	.2119	.2108	.2096	.2084	.2073	.2062
9.60	.2050	.2039	.2028	.2017	.2006	.1995	.1984	.1973	.1962	.1951	.1941	.1930
10.00	.1919	.1909	.1898	.1888	.1878	.1867	.1857	.1847	.1837	.1827	.1817	.1807
10.40	.1797	.1787	.1777	.1767	.1758	.1748	.1738	.1729	.1719	.1710	.1700	.1691
10.80	.1682	.1673	.1663	.1654	.1645	.1636	.1627	.1618	.1609	.1601	.1592	.1583
11.20	.1574	.1566	.1557	.1549	.1540	.1532	.1523	.1515	.1507	.1498	.1490	.1482
11.60	.1474	.1466	.1458	.1450	.1442	.1434	.1426	.1418	.1410	.1403	.1395	.1387
12.00	.1380	.1372	.1365	.1357	.1350	.1342	.1335	.1327	.1320	.1313	.1306	.1299
12.40	.1291	.1284	.1277	.1270	.1263	.1256	.1250	.1243	.1236	.1229	.1222	.1216
12.80	.1209	.1202	.1196	.1189	.1183	.1176	.1170	.1163	.1157	.1151	.1144	.1138
13.20	.1132	.1125	.1119	.1113	.1107	.1101	.1095	.1089	.1083	.1077	.1071	.1065
13.60	.1059	.1054	.1048	.1042	.1036	.1031	.1025	.1019	.1014	.1008	.1003	.0997

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TL - 207

HALF-LIFE 4.78 MINUTES CALCULATION INTERVAL 2.0 SECONDS

MINUTES	SECONDS 0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	22.0
0.00	1.0000	.9951	.9903	.9856	.9808	.9761	.9714	.9667	.9620	.9574	.9528	.9482
.40	.9436	.9390	.9345	.9300	.9255	.9211	.9166	.9122	.9078	.9034	.8991	.8947
.80	.8904	.8861	.8819	.8776	.8734	.8692	.8650	.8608	.8566	.8525	.8484	.8443
1.20	.8402	.8362	.8322	.8281	.8241	.8202	.8162	.8123	.8084	.8045	.8006	.7967
1.60	.7929	.7891	.7853	.7815	.7777	.7739	.7702	.7665	.7628	.7591	.7555	.7518
2.00	.7482	.7446	.7410	.7374	.7339	.7303	.7268	.7233	.7198	.7163	.7129	.7095
2.40	.7060	.7026	.6992	.6959	.6925	.6892	.6858	.6825	.6792	.6760	.6727	.6695
2.80	.6662	.6630	.6598	.6566	.6535	.6503	.6472	.6441	.6410	.6379	.6348	.6317
3.20	.6287	.6257	.6226	.6196	.6167	.6137	.6107	.6078	.6048	.6019	.5990	.5961
3.60	.5933	.5904	.5876	.5847	.5819	.5791	.5763	.5735	.5708	.5680	.5653	.5625
4.00	.5598	.5571	.5544	.5518	.5491	.5465	.5438	.5412	.5386	.5360	.5334	.5308
4.40	.5283	.5257	.5232	.5207	.5182	.5157	.5132	.5107	.5082	.5058	.5033	.5009
4.80	.4985	.4961	.4937	.4913	.4890	.4866	.4843	.4819	.4796	.4773	.4750	.4727
5.20	.4704	.4681	.4659	.4636	.4614	.4592	.4570	.4548	.4526	.4504	.4482	.4460
5.60	.4439	.4418	.4396	.4375	.4354	.4333	.4312	.4291	.4271	.4250	.4229	.4209
6.00	.4189	.4169	.4148	.4128	.4109	.4089	.4069	.4049	.4030	.4010	.3991	.3972
6.40	.3953	.3934	.3915	.3896	.3877	.3858	.3840	.3821	.3803	.3784	.3766	.3748
6.80	.3730	.3712	.3694	.3676	.3658	.3641	.3623	.3606	.3588	.3571	.3554	.3537
7.20	.3520	.3503	.3486	.3469	.3452	.3436	.3419	.3403	.3386	.3370	.3354	.3337
7.60	.3321	.3305	.3289	.3273	.3258	.3242	.3226	.3211	.3195	.3180	.3165	.3149
8.00	.3134	.3119	.3104	.3089	.3074	.3059	.3045	.3030	.3015	.3001	.2986	.2972
8.40	.2957	.2943	.2929	.2915	.2901	.2887	.2873	.2859	.2845	.2832	.2818	.2804
8.80	.2791	.2777	.2764	.2751	.2737	.2724	.2711	.2698	.2685	.2672	.2659	.2646
9.20	.2633	.2621	.2608	.2596	.2583	.2571	.2558	.2546	.2534	.2521	.2509	.2497
9.60	.2485	.2473	.2461	.2449	.2437	.2426	.2414	.2402	.2391	.2379	.2368	.2356
10.00	.2345	.2334	.2322	.2311	.2300	.2289	.2278	.2267	.2256	.2245	.2234	.2224
10.40	.2213	.2202	.2192	.2181	.2170	.2160	.2150	.2139	.2129	.2119	.2108	.2098
10.80	.2088	.2078	.2068	.2058	.2048	.2038	.2028	.2019	.2009	.1999	.1990	.1980
11.20	.1970	.1961	.1951	.1942	.1933	.1923	.1914	.1905	.1896	.1886	.1877	.1868
11.60	.1859	.1850	.1841	.1833	.1824	.1815	.1806	.1797	.1789	.1780	.1772	.1763
12.00	.1755	.1746	.1738	.1729	.1721	.1713	.1704	.1696	.1688	.1680	.1672	.1664
12.40	.1656	.1648	.1640	.1632	.1624	.1616	.1608	.1601	.1593	.1585	.1577	.1570
12.80	.1562	.1555	.1547	.1540	.1532	.1525	.1518	.1510	.1503	.1496	.1489	.1481
13.20	.1474	.1467	.1460	.1453	.1446	.1439	.1432	.1425	.1418	.1411	.1405	.1398
13.60	.1391	.1384	.1378	.1371	.1364	.1358	.1351	.1345	.1338	.1332	.1325	.1319
14.00	.1313	.1306	.1300	.1294	.1288	.1281	.1275	.1269	.1263	.1257	.1251	.1245
14.40	.1239	.1233	.1227	.1221	.1215	.1209	.1203	.1197	.1192	.1186	.1180	.1175
14.80	.1169	.1163	.1158	.1152	.1146	.1141	.1135	.1130	.1124	.1119	.1114	.1108
15.20	.1103	.1098	.1092	.1087	.1082	.1077	.1071	.1066	.1061	.1056	.1051	.1046
15.60	.1041	.1036	.1031	.1026	.1021	.1016	.1011	.1006	.1001	.0996	.0992	.0987

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HALF-LIFE 3.10 MINUTES CALCULATION INTERVAL 1.0 SECONDS

MINUTES	SECONDS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9962	.9925	.9888	.9852	.9815	.9778	.9742	.9706	.9670	.9634	.9598
.20	.9562	.9527	.9491	.9456	.9421	.9386	.9351	.9316	.9281	.9247	.9212	.9178
.40	.9144	.9110	.9076	.9042	.9009	.8975	.8942	.8908	.8875	.8842	.8809	.8777
.60	.8744	.8711	.8679	.8647	.8615	.8583	.8551	.8519	.8487	.8456	.8424	.8393
.80	.8362	.8330	.8299	.8269	.8238	.8207	.8177	.8146	.8116	.8086	.8056	.8026
1.00	.7996	.7966	.7937	.7907	.7878	.7848	.7819	.7790	.7761	.7732	.7703	.7675
1.20	.7646	.7618	.7589	.7561	.7533	.7505	.7477	.7449	.7422	.7394	.7366	.7339
1.40	.7312	.7285	.7257	.7230	.7204	.7177	.7150	.7123	.7097	.7071	.7044	.7018
1.60	.6992	.6966	.6940	.6914	.6889	.6863	.6837	.6812	.6787	.6761	.6736	.6711
1.80	.6686	.6661	.6637	.6612	.6587	.6563	.6538	.6514	.6490	.6466	.6442	.6418
2.00	.6394	.6370	.6346	.6323	.6299	.6276	.6252	.6229	.6206	.6183	.6160	.6137
2.20	.6114	.6091	.6069	.6046	.6024	.6001	.5979	.5957	.5934	.5912	.5890	.5868
2.40	.5847	.5825	.5803	.5782	.5760	.5739	.5717	.5696	.5675	.5654	.5633	.5612
2.60	.5591	.5570	.5549	.5529	.5508	.5488	.5467	.5447	.5427	.5407	.5386	.5366
2.80	.5346	.5327	.5307	.5287	.5267	.5248	.5228	.5209	.5189	.5170	.5151	.5132
3.00	.5113	.5094	.5075	.5056	.5037	.5018	.5000	.4981	.4962	.4944	.4926	.4907
3.20	.4889	.4871	.4853	.4835	.4817	.4799	.4781	.4763	.4745	.4728	.4710	.4693
3.40	.4675	.4658	.4640	.4623	.4606	.4589	.4572	.4555	.4538	.4521	.4504	.4487
3.60	.4471	.4454	.4437	.4421	.4404	.4388	.4372	.4356	.4339	.4323	.4307	.4291
3.80	.4275	.4259	.4243	.4228	.4212	.4196	.4181	.4165	.4150	.4134	.4119	.4103
4.00	.4088	.4073	.4058	.4043	.4028	.4013	.3998	.3983	.3968	.3953	.3939	.3924
4.20	.3909	.3895	.3880	.3866	.3851	.3837	.3823	.3809	.3794	.3780	.3766	.3752
4.40	.3738	.3724	.3711	.3697	.3683	.3669	.3656	.3642	.3628	.3615	.3602	.3588
4.60	.3575	.3561	.3548	.3535	.3522	.3509	.3496	.3483	.3470	.3457	.3444	.3431
4.80	.3418	.3406	.3393	.3380	.3368	.3355	.3343	.3330	.3318	.3306	.3293	.3281
5.00	.3269	.3257	.3245	.3233	.3221	.3209	.3197	.3185	.3173	.3161	.3149	.3138
5.20	.3126	.3114	.3103	.3091	.3080	.3068	.3057	.3045	.3034	.3023	.3012	.3000
5.40	.2989	.2978	.2967	.2956	.2945	.2934	.2923	.2912	.2901	.2891	.2880	.2869
5.60	.2858	.2848	.2837	.2827	.2816	.2806	.2795	.2785	.2774	.2764	.2754	.2744
5.80	.2733	.2723	.2713	.2703	.2693	.2683	.2673	.2663	.2653	.2643	.2633	.2624
6.00	.2614	.2604	.2594	.2585	.2575	.2566	.2556	.2547	.2537	.2528	.2518	.2509
6.20	.2500	.2490	.2481	.2472	.2463	.2453	.2444	.2435	.2426	.2417	.2408	.2399
6.40	.2390	.2381	.2372	.2364	.2355	.2346	.2337	.2329	.2320	.2311	.2303	.2294
6.60	.2286	.2277	.2269	.2260	.2252	.2243	.2235	.2227	.2218	.2210	.2202	.2194
6.80	.2186	.2178	.2169	.2161	.2153	.2145	.2137	.2129	.2121	.2114	.2106	.2098
7.00	.2090	.2082	.2075	.2067	.2059	.2051	.2044	.2036	.2029	.2021	.2014	.2006
7.20	.1999	.1991	.1984	.1976	.1969	.1962	.1954	.1947	.1940	.1933	.1925	.1918
7.40	.1911	.1904	.1897	.1890	.1883	.1876	.1869	.1862	.1855	.1848	.1841	.1834
7.60	.1828	.1821	.1814	.1807	.1801	.1794	.1787	.1781	.1774	.1767	.1761	.1754
7.80	.1748	.1741	.1735	.1728	.1722	.1715	.1709	.1703	.1696	.1690	.1684	.1677

TL - 208

HALF-LIFE 3.10 MINUTES CALCULATION INTERVAL 1.0 SECONDS

MINUTES	SECONDS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
8.00	.1671	.1665	.1659	.1653	.1646	.1640	.1634	.1628	.1622	.1616	.1610	.1604
8.20	.1598	.1592	.1586	.1580	.1574	.1569	.1563	.1557	.1551	.1545	.1540	.1534
8.40	.1528	.1522	.1517	.1511	.1506	.1500	.1494	.1489	.1483	.1478	.1472	.1467
8.60	.1461	.1456	.1450	.1445	.1440	.1434	.1429	.1424	.1418	.1413	.1408	.1403
8.80	.1397	.1392	.1387	.1382	.1377	.1372	.1366	.1361	.1356	.1351	.1346	.1341
9.00	.1336	.1331	.1326	.1321	.1316	.1312	.1307	.1302	.1297	.1292	.1287	.1283
9.20	.1278	.1273	.1268	.1264	.1259	.1254	.1250	.1245	.1240	.1236	.1231	.1226
9.40	.1222	.1217	.1213	.1208	.1204	.1199	.1195	.1190	.1186	.1182	.1177	.1173
9.60	.1168	.1164	.1160	.1155	.1151	.1147	.1143	.1138	.1134	.1130	.1126	.1121
9.80	.1117	.1113	.1109	.1105	.1101	.1097	.1093	.1089	.1084	.1080	.1076	.1072
10.00	.1068	.1064	.1060	.1057	.1053	.1049	.1045	.1041	.1037	.1033	.1029	.1025
10.20	.1022	.1018	.1014	.1010	.1007	.1003	.0999	.0995	.0992	.0988	.0984	.0981

TL - 209

HALF-LIFE 2.20 MINUTES CALCULATION INTERVAL 1.0 SECONDS

MINUTES	SECONDS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9947	.9895	.9843	.9792	.9740	.9689	.9639	.9588	.9538	.9488	.9438
.20	.9389	.9340	.9291	.9242	.9194	.9145	.9098	.9050	.9003	.8955	.8908	.8862
.40	.8815	.8769	.8723	.8678	.8632	.8587	.8542	.8497	.8453	.8408	.8364	.8321
.60	.8277	.8234	.8191	.8148	.8105	.8063	.8020	.7978	.7937	.7895	.7854	.7812
.80	.7772	.7731	.7690	.7650	.7610	.7570	.7530	.7491	.7452	.7413	.7374	.7335
1.00	.7297	.7259	.7221	.7183	.7145	.7108	.7071	.7034	.6997	.6960	.6924	.6887
1.20	.6851	.6815	.6780	.6744	.6709	.6674	.6639	.6604	.6569	.6535	.6501	.6467
1.40	.6433	.6399	.6366	.6332	.6299	.6266	.6233	.6201	.6168	.6136	.6104	.6072
1.60	.6040	.6008	.5977	.5946	.5914	.5883	.5853	.5822	.5791	.5761	.5731	.5701
1.80	.5671	.5641	.5612	.5582	.5553	.5524	.5495	.5466	.5438	.5409	.5381	.5353
2.00	.5325	.5297	.5269	.5241	.5214	.5187	.5160	.5133	.5106	.5079	.5052	.5026
2.20	.5000	.4973	.4947	.4921	.4896	.4870	.4844	.4819	.4794	.4769	.4744	.4719
2.40	.4694	.4670	.4645	.4621	.4597	.4573	.4549	.4525	.4501	.4477	.4454	.4431
2.60	.4407	.4384	.4361	.4339	.4316	.4293	.4271	.4248	.4226	.4204	.4182	.4160
2.80	.4138	.4117	.4095	.4074	.4052	.4031	.4010	.3989	.3968	.3947	.3927	.3906
3.00	.3886	.3865	.3845	.3825	.3805	.3785	.3765	.3745	.3726	.3706	.3687	.3667
3.20	.3648	.3629	.3610	.3591	.3572	.3554	.3535	.3517	.3498	.3480	.3462	.3443
3.40	.3425	.3407	.3390	.3372	.3354	.3337	.3319	.3302	.3284	.3267	.3250	.3233
3.60	.3216	.3199	.3183	.3166	.3149	.3133	.3116	.3100	.3084	.3068	.3052	.3036
3.80	.3020	.3004	.2988	.2973	.2957	.2941	.2926	.2911	.2895	.2880	.2865	.2850
4.00	.2835	.2820	.2806	.2791	.2776	.2762	.2747	.2733	.2719	.2704	.2690	.2676
4.20	.2662	.2648	.2634	.2620	.2607	.2593	.2580	.2566	.2553	.2539	.2526	.2513
4.40	.2500	.2486	.2473	.2460	.2448	.2435	.2422	.2409	.2397	.2384	.2372	.2359
4.60	.2347	.2335	.2322	.2310	.2298	.2286	.2274	.2262	.2250	.2238	.2227	.2215
4.80	.2204	.2192	.2180	.2169	.2158	.2146	.2135	.2124	.2113	.2102	.2091	.2080
5.00	.2069	.2058	.2047	.2037	.2026	.2015	.2005	.1994	.1984	.1973	.1963	.1953
5.20	.1943	.1932	.1922	.1912	.1902	.1892	.1882	.1872	.1863	.1853	.1843	.1833
5.40	.1824	.1814	.1805	.1795	.1786	.1777	.1767	.1758	.1749	.1740	.1731	.1721
5.60	.1712	.1703	.1695	.1686	.1677	.1668	.1659	.1651	.1642	.1633	.1625	.1616
5.80	.1608	.1599	.1591	.1583	.1574	.1566	.1558	.1550	.1542	.1534	.1526	.1518
6.00	.1510	.1502	.1494	.1486	.1478	.1470	.1463	.1455	.1447	.1440	.1432	.1425
6.20	.1417	.1410	.1403	.1395	.1388	.1381	.1373	.1366	.1359	.1352	.1345	.1338
6.40	.1331	.1324	.1317	.1310	.1303	.1296	.1290	.1283	.1276	.1269	.1263	.1256
6.60	.1250	.1243	.1236	.1230	.1224	.1217	.1211	.1204	.1198	.1192	.1186	.1179
6.80	.1173	.1167	.1161	.1155	.1149	.1143	.1137	.1131	.1125	.1119	.1113	.1107
7.00	.1101	.1096	.1090	.1084	.1079	.1073	.1067	.1062	.1056	.1051	.1045	.1040
7.20	.1034	.1029	.1023	.1018	.1013	.1007	.1002	.0997	.0992	.0986	.0981	.0976

TL - 210

HALF-LIFE 1.30 MINUTES CALCULATION INTERVAL 1.0 SECONDS

MINUTES	SECONDS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9911	.9823	.9736	.9650	.9565	.9480	.9396	.9313	.9231	.9149	.9068
.20	.8988	.8908	.8830	.8752	.8674	.8597	.8521	.8446	.8371	.8297	.8224	.8151
.40	.8079	.8007	.7937	.7866	.7797	.7728	.7659	.7592	.7524	.7458	.7392	.7326
.60	.7262	.7197	.7134	.7071	.7008	.6946	.6885	.6824	.6763	.6703	.6644	.6585
.80	.6527	.6469	.6412	.6355	.6299	.6243	.6188	.6133	.6079	.6025	.5972	.5919
1.00	.5867	.5815	.5763	.5712	.5662	.5612	.5562	.5513	.5464	.5416	.5368	.5320
1.20	.5273	.5227	.5180	.5135	.5089	.5044	.5000	.4955	.4911	.4868	.4825	.4782
1.40	.4740	.4698	.4656	.4615	.4574	.4534	.4494	.4454	.4415	.4376	.4337	.4298
1.60	.4260	.4223	.4185	.4148	.4112	.4075	.4039	.4003	.3968	.3933	.3898	.3864
1.80	.3829	.3796	.3762	.3729	.3696	.3663	.3631	.3598	.3567	.3535	.3504	.3473
2.00	.3442	.3412	.3381	.3351	.3322	.3292	.3263	.3234	.3206	.3177	.3149	.3121
2.20	.3094	.3066	.3039	.3012	.2986	.2959	.2933	.2907	.2881	.2856	.2831	.2806
2.40	.2781	.2756	.2732	.2708	.2684	.2660	.2636	.2613	.2590	.2567	.2544	.2522
2.60	.2500	.2477	.2455	.2434	.2412	.2391	.2370	.2349	.2328	.2307	.2287	.2267
2.80	.2247	.2227	.2207	.2188	.2168	.2149	.2130	.2111	.2092	.2074	.2056	.2037
3.00	.2019	.2001	.1984	.1966	.1949	.1932	.1914	.1898	.1881	.1864	.1848	.1831
3.20	.1815	.1799	.1783	.1767	.1752	.1736	.1721	.1706	.1690	.1675	.1661	.1646
3.40	.1631	.1617	.1603	.1588	.1574	.1560	.1547	.1533	.1519	.1506	.1493	.1479
3.60	.1466	.1453	.1440	.1428	.1415	.1403	.1390	.1378	.1366	.1354	1342	.1330
3.80	.1318	.1306	.1295	.1283	.1272	.1261	.1250	.1238	.1227	.1217	.1206	.1195
4.00	.1185	.1174	.1164	.1153	.1143	.1133	.1123	.1113	.1103	.1094	.1084	.1074
4.20	.1065	.1055	.1046	.1037	.1028	.1018	.1009	.1000	.0992	.0983	.0974	.0966

TH - 227

HALF-LIFE 18.17 DAYS CALCULATION INTERVAL 4.0 HOURS

DAYS	HOURS 0.0	4.0	8.0	12.0	16.0	20.0	24.0	28.0	32.0	36.0	40.0	44.0
0.00	1.0000	.9936	.9873	.9811	.9748	.9687	.9625	.9564	.9504	.9443	.9383	.9324
2.00	.9265	.9206	.9148	.9090	.9032	.8975	.8918	.8862	.8805	.8750	.8694	.8639
4.00	.8584	.8530	.8476	.8422	.8369	.8316	.8263	.8211	.8159	.8107	.8055	.8004
6.00	.7954	.7903	.7853	.7803	.7754	.7705	.7656	.7607	.7559	.7511	.7464	.7416
8.00	.7369	.7323	.7276	.7230	.7184	.7139	.7094	.7049	.7004	.6960	.6915	.6872
10.00	.6828	.6785	.6742	.6699	.6657	.6614	.6572	.6531	.6489	.6448	.6407	.6367
12.00	.6326	.6286	.6246	.6207	.6168	.6128	.6090	.6051	.6013	.5975	.5937	.5899
14.00	.5862	.5824	.5788	.5751	.5714	.5678	.5642	.5606	.5571	.5536	.5501	.5466
16.00	.5431	.5397	.5362	.5328	.5295	.5261	.5228	.5195	.5162	.5129	.5096	.5064
18.00	.5032	.5000	.4968	.4937	.4906	.4875	.4844	.4813	.4782	.4752	.4722	.4692
20.00	.4662	.4633	.4603	.4574	.4545	.4516	.4488	.4459	.4431	.4403	.4375	.4347
22.00	.4320	.4292	.4265	.4238	.4211	.4185	.4158	.4132	.4106	.4080	.4054	.4028
24.00	.4002	.3977	.3952	.3927	.3902	.3877	.3853	.3828	.3804	.3780	.3756	.3732
26.00	.3708	.3685	.3662	.3638	.3615	.3592	.3570	.3547	.3524	.3502	.3480	.3458
28.00	.3436	.3414	.3393	.3371	.3350	.3328	.3307	.3286	.3266	.3245	.3224	.3204
30.00	.3184	.3163	.3143	.3123	.3104	.3084	.3064	.3045	.3026	.3006	.2987	.2968
32.00	.2950	.2931	.2912	.2894	.2876	.2857	.2839	.2821	.2803	.2786	.2768	.2750
34.00	.2733	.2716	.2698	.2681	.2664	.2647	.2631	.2614	.2597	.2581	.2565	.2548
36.00	.2532	.2516	.2500	.2484	.2469	.2453	.2437	.2422	.2407	.2391	.2376	.2361
38.00	.2346	.2331	.2316	.2302	.2287	.2273	.2258	.2244	.2230	.2216	.2202	.2188
40.00	.2174	.2160	.2146	.2133	.2119	.2106	.2092	.2079	.2066	.2053	.2040	.2027
42.00	.2014	.2001	.1989	.1976	.1963	.1951	.1939	.1926	.1914	.1902	.1890	.1878
44.00	.1866	.1854	.1842	.1831	.1819	.1808	.1796	.1785	.1773	.1762	.1751	.1740
46.00	.1729	.1718	.1707	.1696	.1685	.1675	.1664	.1654	.1643	.1633	.1622	.1612
48.00	.1602	.1592	.1582	.1572	.1562	.1552	.1542	.1532	.1522	.1513	.1503	.1494
50.00	.1484	.1475	.1465	.1456	.1447	.1438	.1429	.1420	.1411	.1402	.1393	.1384
52.00	.1375	.1366	.1358	.1349	.1341	.1332	.1324	.1315	.1307	.1299	.1290	.1282
54.00	.1274	.1266	.1258	.1250	.1242	.1234	.1226	.1219	.1211	.1203	.1196	.1188
56.00	.1180	.1173	.1166	.1158	.1151	.1143	.1136	.1129	.1122	.1115	.1108	.1101
58.00	.1094	.1087	.1080	.1073	.1066	.1059	.1053	.1046	.1039	.1033	.1026	.1020
60.00	.1013	.1007	.1001	.0994	.0988	.0982	.0975	.0969	.0963	.0957	.0951	.0945

TH - 228

HALF-LIFE 1.91 YEARS CALCULATION INTERVAL 5.0 DAYS

DAYS	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0
0.0	1.0000	.9950	.9901	.9851	.9803	.9754	.9706	.9657	.9610	.9562
50.0	.9515	.9467	.9420	.9374	.9327	.9281	.9235	.9189	.9144	.9098
100.0	.9053	.9008	.8964	.8919	.8875	.8831	.8787	.8743	.8700	.8657
150.0	.8614	.8571	.8529	.8486	.8444	.8403	.8361	.8319	.8278	.8237
200.0	.8196	.8156	.8115	.8075	.8035	.7995	.7955	.7916	.7877	.7838
250.0	.7799	.7760	.7722	.7683	.7645	.7607	.7569	.7532	.7495	.7457
300.0	.7420	.7384	.7347	.7311	.7274	.7238	.7202	.7167	.7131	.7096
350.0	.7061	.7026	.6991	.6956	.6922	.6887	.6853	.6819	.6785	.6752
400.0	.6718	.6685	.6652	.6619	.6586	.6553	.6521	.6488	.6456	.6424
450.0	.6392	.6361	.6329	.6298	.6266	.6235	.6204	.6174	.6143	.6113
500.0	.6082	.6052	.6022	.5992	.5962	.5933	.5903	.5874	.5845	.5816
550.0	.5787	.5759	.5730	.5702	.5673	.5645	.5617	.5589	.5562	.5534
600.0	.5507	.5479	.5452	.5425	.5398	.5371	.5345	.5318	.5292	.5266
650.0	.5239	.5213	.5188	.5162	.5136	.5111	.5085	.5060	.5035	.5010
700.0	.4985	.4961	.4936	.4912	.4887	.4863	.4839	.4815	.4791	.4767
750.0	.4744	.4720	.4697	.4673	.4650	.4627	.4604	.4581	.4559	.4536
800.0	.4513	.4491	.4469	.4447	.4425	.4403	.4381	.4359	.4337	.4316
850.0	.4295	.4273	.4252	.4231	.4210	.4189	.4168	.4148	.4127	.4107
900.0	.4086	.4066	.4046	.4026	.4006	.3986	.3966	.3946	.3927	.3907
950.0	.3888	.3869	.3850	.3831	.3812	.3793	.3774	.3755	.3736	.3718
1000.0	.3699	.3681	.3663	.3645	.3627	.3609	.3591	.3573	.3555	.3538
1050.0	.3520	.3503	.3485	.3468	.3451	.3434	.3417	.3400	.3383	.3366
1100.0	.3349	.3333	.3316	.3300	.3283	.3267	.3251	.3235	.3219	.3203
1150.0	.3187	.3171	.3155	.3140	.3124	.3109	.3093	.3078	.3063	.3047
1200.0	.3032	.3017	.3002	.2987	.2973	.2958	.2943	.2929	.2914	.2900
1250.0	.2885	.2871	.2857	.2842	.2828	.2814	.2800	.2786	.2773	.2759
1300.0	.2745	.2732	.2718	.2705	.2691	.2678	.2665	.2651	.2638	.2625
1350.0	.2612	.2599	.2586	.2573	.2561	.2548	.2535	.2523	.2510	.2498
1400.0	.2485	.2473	.2461	.2449	.2436	.2424	.2412	.2400	.2388	.2377
1450.0	.2365	.2353	.2341	.2330	.2318	.2307	.2295	.2284	.2273	.2261
1500.0	.2250	.2239	.2228	.2217	.2206	.2195	.2184	.2173	.2162	.2152
1550.0	.2141	.2130	.2120	.2109	.2099	.2088	.2078	.2068	.2057	.2047
1600.0	.2037	.2027	.2017	.2007	.1997	.1987	.1977	.1967	.1958	.1948
1650.0	.1938	.1929	.1919	.1910	.1900	.1891	.1881	.1872	.1863	.1853
1700.0	.1844	.1835	.1826	.1817	.1808	.1799	.1790	.1781	.1772	.1764
1750.0	.1755	.1746	.1737	.1729	.1720	.1712	.1703	.1695	.1686	.1678
1800.0	.1670	.1661	.1653	.1645	.1637	.1629	.1621	.1613	.1605	.1597
1850.0	.1589	.1581	.1573	.1565	.1557	.1550	.1542	.1534	.1527	.15[illegible]
1900.0	.1512	.1504	.1497	.1489	.1482	.1474	.1467	.1460	.1453	.1445
1950.0	.1438	.1431	.1424	.1417	.1410	.1403	.1396	.1389	.1382	.1375

TH - 228

HALF-LIFE 1.91 YEARS CALCULATION INTERVAL 5.0 DAYS

DAYS	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0
2000.0	.1368	.1362	.1355	.1348	.1342	.1335	.1328	.1322	.1315	.1309
2050.0	.1302	.1296	.1289	.1283	.1276	.1270	.1264	.1258	.1251	.1245
2100.0	.1239	.1233	.1227	.1221	.1215	.1208	.1203	.1197	.1191	.1185
2150.0	.1179	.1173	.1167	.1161	.1156	.1150	.1144	.1138	.1133	.1127
2200.0	.1122	.1116	.1111	.1105	.1100	.1094	.1089	.1083	.1078	.1073
2250.0	.1067	.1062	.1057	.1051	.1046	.1041	.1036	.1031	.1026	.1020
2300.0	.1015	.1010	.1005	.1000	.0995	.0990	.0986	.0981	.0976	.0971

TH - 229

HALF-LIFE 7300.00 YEARS CALCULATION INTERVAL 75.0 YEARS

YEARS	0.0	75.0	150.0	225.0	300.0	375.0	450.0	525.0	600.0	675.0
0.0	1.0000	.9929	.9858	.9788	.9719	.9650	.9581	.9513	.9446	.9379
750.0	.9312	.9246	.9180	.9115	.9051	.8986	.8923	.8859	.8796	.8734
1500.0	.8672	.8610	.8549	.8489	.8428	.8369	.8309	.8250	.8192	.8134
2250.0	.8076	.8019	.7962	.7905	.7849	.7793	.7738	.7683	.7629	.7574
3000.0	.7521	.7467	.7414	.7362	.7310	.7258	.7206	.7155	.7104	.7054
3750.0	.7004	.6954	.6905	.6856	.6807	.6759	.6711	.6663	.6616	.6569
4500.0	.6522	.6476	.6430	.6384	.6339	.6294	.6249	.6205	.6161	.6117
5250.0	.6074	.6031	.5988	.5946	.5903	.5861	.5820	.5779	.5738	.5697
6000.0	.5656	.5616	.5576	.5537	.5498	.5459	.5420	.5381	.5343	.5305
6750.0	.5268	.5230	.5193	.5156	.5120	.5083	.5047	.5011	.4976	.4941
7500.0	.4905	.4871	.4836	.4802	.4768	.4734	.4700	.4667	.4634	.4601
8250.0	.4568	.4536	.4504	.4472	.4440	.4408	.4377	.4346	.4315	.4285
9000.0	.4254	.4224	.4194	.4164	.4135	.4105	.4076	.4047	.4019	.3990
9750.0	.3962	.3934	.3906	.3878	.3850	.3823	.3796	.3769	.3742	.3716

TH = 231

HALF-LIFE 25.60 HOURS CALCULATION INTERVAL 15.0 MINUTES

HOURS	MINUTES 0.0	15.0	30.0	45.0	60.0	75.0	90.0	105.0	120.0	135.0	150.0	165.0
0.00	1.0000	.9932	.9865	.9798	.9732	.9667	.9601	.9537	.9472	.9408	.9345	.9282
3.00	.9219	.9157	.9095	.9034	.8973	.8913	.8852	.8793	.8733	.8674	.8616	.8558
6.00	.8500	.8443	.8386	.8329	.8273	.8217	.8162	.8107	.8052	.7998	.7944	.7890
9.00	.7837	.7784	.7731	.7679	.7627	.7576	.7525	.7474	.7424	.7374	.7324	.7274
12.00	.7225	.7177	.7128	.7080	.7032	.6985	.6938	.6891	.6845	.6798	.6752	.6707
15.00	.6662	.6617	.6572	.6528	.6484	.6440	.6397	.6353	.6310	.6268	.6226	.6184
18.00	.6142	.6100	.6059	.6018	.5978	.5937	.5897	.5858	.5818	.5779	.5740	.5701
21.00	.5663	.5624	.5587	.5549	.5511	.5474	.5437	.5401	.5364	.5328	.5292	.5256
24.00	.5221	.5186	.5151	.5116	.5081	.5047	.5013	.4979	.4946	.4912	.4879	.4846
27.00	.4814	.4781	.4749	.4717	.4685	.4653	.4622	.4591	.4560	.4529	.4498	.4468
30.00	.4438	.4408	.4378	.4349	.4319	.4290	.4261	.4233	.4204	.4176	.4147	.4119
33.00	.4092	.4064	.4037	.4009	.3982	.3955	.3929	.3902	.3876	.3850	.3824	.3798
36.00	.3772	.3747	.3722	.3697	.3672	.3647	.3622	.3598	.3574	.3549	.3525	.3502
39.00	.3478	.3455	.3431	.3408	.3385	.3362	.3340	.3317	.3295	.3272	.3250	.3228
42.00	.3207	.3185	.3164	.3142	.3121	.3100	.3079	.3058	.3038	.3017	.2997	.2977
45.00	.2956	.2937	.2917	.2897	.2877	.2858	.2839	.2820	.2801	.2782	.2763	.2744
48.00	.2726	.2707	.2689	.2671	.2653	.2635	.2617	.2600	.2582	.2565	.2547	.2530
51.00	.2513	.2496	.2479	.2463	.2446	.2429	.2413	.2397	.2381	.2365	.2349	.2333
54.00	.2317	.2301	.2286	.2270	.2255	.2240	.2225	.2210	.2195	.2180	.2165	.2151
57.00	.2136	.2122	.2107	.2093	.2079	.2065	.2051	.2037	.2024	.2010	.1996	.1983
60.00	.1969	.1956	.1943	.1930	.1917	.1904	.1891	.1878	.1866	.1853	.1841	.1828
63.00	.1816	.1804	.1791	.1779	.1767	.1755	.1743	.1732	.1720	.1708	.1697	.1685
66.00	.1674	.1663	.1652	.1640	.1629	.1618	.1607	.1597	.1586	.1575	.1564	.1554
69.00	.1543	.1533	.1523	.1512	.1502	.1492	.1482	.1473	.1462	.1452	.1442	.1433
72.00	.1423	.1413	.1404	.1394	.1385	.1376	.1366	.1357	.1348	.1339	.1330	.1321
75.00	.1312	.1303	.1294	.1286	.1277	.1268	.1260	.1251	.1243	.1234	.1226	.1218
78.00	.1210	.1201	.1193	.1185	.1177	.1169	.1161	.1154	.1146	.1138	.1130	.1123
81.00	.1115	.1108	.1100	.1093	.1085	.1078	.1071	.1064	.1056	.1049	.1042	.1035
84.00	.1028	.1021	.1014	.1007	.1001	.0994	.0987	.0980	.0974	.0967	.0961	.0954

TH - 234

HALF-LIFE 24.10 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
0.00	1.0000	.9928	.9857	.9786	.9716	.9646	.9577	.9509	.9441	.9373	.9306	.9239
3.00	.9173	.9107	.9042	.8977	.8913	.8849	.8785	.8723	.8660	.8598	.8536	.8475
6.00	.8415	.8354	.8294	.8235	.8176	.8117	.8059	.8001	.7944	.7887	.7831	.7775
9.00	.7719	.7664	.7609	.7554	.7500	.7446	.7393	.7340	.7287	.7235	.7183	.7132
12.00	.7081	.7030	.6980	.6930	.6880	.6831	.6782	.6733	.6685	.6637	.6589	.6542
15.00	.6495	.6449	.6403	.6357	.6311	.6266	.6221	.6177	.6132	.6088	.6045	.6001
18.00	.5958	.5916	.5873	.5831	.5789	.5748	.5707	.5666	.5625	.5585	.5545	.5505
21.00	.5465	.5427	.5388	.5349	.5311	.5273	.5235	.5197	.5160	.5123	.5087	.5050
24.00	.5014	.4978	.4942	.4907	.4872	.4837	.4802	.4768	.4734	.4700	.4666	.4633
27.00	.4599	.4566	.4534	.4501	.4469	.4437	.4405	.4374	.4342	.4311	.4280	.4250
30.00	.4219	.4189	.4159	.4129	.4099	.4070	.4041	.4012	.3983	.3955	.3926	.3898
33.00	.3870	.3843	.3815	.3788	.3761	.3734	.3707	.3680	.3654	.3628	.3602	.3576
36.00	.3550	.3525	.3500	.3475	.3450	.3425	.3400	.3376	.3352	.3328	.3304	.3280
39.00	.3257	.3233	.3210	.3187	.3164	.3142	.3119	.3097	.3075	.3053	.3031	.3009
42.00	.2988	.2966	.2945	.2924	.2903	.2882	.2861	.2841	.2820	.2800	.2780	.2760
45.00	.2741	.2721	.2701	.2682	.2663	.2644	.2625	.2606	.2587	.2569	.2550	.2532
48.00	.2514	.2496	.2478	.2460	.2443	.2425	.2408	.2390	.2373	.2356	.2339	.2323
51.00	.2306	.2290	.2273	.2257	.2241	.2225	.2209	.2193	.2177	.2162	.2146	.2131
54.00	.2115	.2100	.2085	.2070	.2055	.2041	.2026	.2012	.1997	.1983	.1969	.1954
57.00	.1940	.1927	.1913	.1899	.1885	.1872	.1859	.1845	.1832	.1819	.1806	.1793
60.00	.1780	.1767	.1755	.1742	.1730	.1717	.1705	.1693	.1680	.1668	.1656	.1645
63.00	.1633	.1621	.1610	.1598	.1587	.1575	.1564	.1553	.1542	.1530	.1520	.1509
66.00	.1498	.1487	.1476	.1466	.1455	.1445	.1435	.1424	.1414	.1404	.1394	.1384
69.00	.1374	.1364	.1354	.1345	.1335	.1325	.1316	.1306	.1297	.1288	.1279	.1269
72.00	.1260	.1251	.1242	.1233	.1225	.1216	.1207	.1198	.1190	.1181	.1173	.1164
75.00	.1156	.1148	.1140	.1131	.1123	.1115	.1107	.1099	.1091	.1084	.1076	.1068
78.00	.1060	.1053	.1045	.1038	.1030	.1023	.1016	.1008	.1001	.0994	.0987	.0980

TM - 170

HALF-LIFE 127.00 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	1.0000	.9945	.9891	.9837	.9784	.9730	.9677	.9625	.9572	.9520
10.0	.9468	.9417	.9366	.9315	.9264	.9213	.9163	.9113	.9064	.9014
20.0	.8965	.8917	.8868	.8820	.8772	.8724	.8677	.8629	.8582	.8536
30.0	.8489	.8443	.8397	.8351	.8306	.8261	.8216	.8171	.8126	.8082
40.0	.8038	.7994	.7951	.7908	.7865	.7822	.7779	.7737	.7695	.7653
50.0	.7611	.7570	.7529	.7488	.7447	.7406	.7366	.7326	.7286	.7246
60.0	.7207	.7168	.7129	.7090	.7051	.7013	.6975	.6937	.6899	.6861
70.0	.6824	.6787	.6750	.6713	.6677	.6640	.6604	.6568	.6533	.6497
80.0	.6462	.6426	.6391	.6357	.6322	.6288	.6253	.6219	.6186	.6152
90.0	.6118	.6085	.6052	.6019	.5986	.5954	.5921	.5889	.5857	.5825
100.0	.5793	.5762	.5730	.5699	.5668	.5637	.5607	.5576	.5546	.5516
110.0	.5486	.5456	.5426	.5397	.5367	.5338	.5309	.5280	.5251	.5223
120.0	.5194	.5166	.5138	.5110	.5082	.5054	.5027	.5000	.4972	.4945
130.0	.4918	.4892	.4865	.4838	.4812	.4786	.4760	.4734	.4708	.4683
140.0	.4657	.4632	.4606	.4581	.4556	.4532	.4507	.4482	.4458	.4434
150.0	.4410	.4386	.4362	.4338	.4314	.4291	.4268	.4244	.4221	.4198
160.0	.4175	.4153	.4130	.4108	.4085	.4063	.4041	.4019	.3997	.3975
170.0	.3954	.3932	.3911	.3889	.3868	.3847	.3826	.3805	.3785	.3764
180.0	.3744	.3723	.3703	.3683	.3663	.3643	.3623	.3603	.3584	.3564
190.0	.3545	.3525	.3506	.3487	.3468	.3449	.3430	.3412	.3393	.3375
200.0	.3356	.3338	.3320	.3302	.3284	.3266	.3248	.3231	.3213	.3195
210.0	.3178	.3161	.3144	.3126	.3109	.3093	.3076	.3059	.3042	.3026
220.0	.3009	.2993	.2977	.2960	.2944	.2928	.2912	.2896	.2881	.2865
230.0	.2849	.2834	.2818	.2803	.2788	.2773	.2758	.2743	.2728	.2713
240.0	.2698	.2683	.2669	.2654	.2640	.2625	.2611	.2597	.2583	.2569
250.0	.2555	.2541	.2527	.2513	.2500	.2486	.2472	.2459	.2446	.2432
260.0	.2419	.2406	.2393	.2380	.2367	.2354	.2341	.2328	.2316	.2303
270.0	.2290	.2278	.2266	.2253	.2241	.2229	.2217	.2205	.2193	.2181
280.0	.2169	.2157	.2145	.2134	.2122	.2110	.2099	.2087	.2076	.2065
290.0	.2054	.2042	.2031	.2020	.2009	.1998	.1987	.1977	.1966	.1955
300.0	.1944	.1934	.1923	.1913	.1902	.1892	.1882	.1872	.1861	.1851
310.0	.1841	.1831	.1821	.1811	.1801	.1792	.1782	.1772	.1762	.1753
320.0	.1743	.1734	.1724	.1715	.1706	.1696	.1687	.1678	.1669	.1660
330.0	.1651	.1642	.1633	.1624	.1615	.1606	.1597	.1589	.1580	.1572
340.0	.1563	.1554	.1546	.1538	.1529	.1521	.1513	.1504	.1496	.1488
350.0	.1480	.1472	.1464	.1456	.1448	.1440	.1432	.1424	.1417	.1409
360.0	.1401	.1394	.1386	.1379	.1371	.1364	.1356	.1349	.1341	.1334
370.0	.1327	.1320	.1312	.1305	.1298	.1291	.1284	.1277	.1270	.1263
380.0	.1256	.1250	.1243	.1236	.1229	.1223	.1216	.1209	.1203	.1196
390.0	.1190	.1183	.1177	.1170	.1164	.1158	.1151	.1145	.1139	.1133
400.0	.1126	.1120	.1114	.1108	.1102	.1096	.1090	.1084	.1078	.1072
410.0	.1067	.1061	.1055	.1049	.1043	.1038	.1032	.1027	.1021	.1015
420.0	.1010	.1004	.0999	.0993	.0988	.0983	.0977	.0972	.0967	.0961

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HALF-LIFE 118.00 DAYS CALCULATION INTERVAL 12.0 HOURS

DAYS	HOURS 0.0	12.0	24.0	36.0	48.0	60.0	72.0	84.0	96.0	108.0	120.0	132.0
0.00	1.0000	.9970	.9941	.9912	.9883	.9854	.9825	.9796	.9767	.9739	.9710	.9682
6.00	.9653	.9625	.9597	.9569	.9540	.9512	.9485	.9457	.9429	.9401	.9374	.9346
12.00	.9319	.9292	.9264	.9237	.9210	.9183	.9156	.9129	.9102	.9076	.9049	.9023
18.00	.8996	.8970	.8943	.8917	.8891	.8865	.8839	.8813	.8787	.8761	.8736	.8710
24.00	.8685	.8659	.8634	.8608	.8583	.8558	.8533	.8508	.8483	.8458	.8433	.8408
30.00	.8384	.8359	.8335	.8310	.8286	.8262	.8237	.8213	.8189	.8165	.8141	.8117
36.00	.8093	.8070	.8046	.8022	.7999	.7975	.7952	.7929	.7905	.7882	.7859	.7836
42.00	.7813	.7790	.7767	.7745	.7722	.7699	.7677	.7654	.7632	.7609	.7587	.7565
48.00	.7543	.7520	.7498	.7476	.7454	.7433	.7411	.7389	.7367	.7346	.7324	.7303
54.00	.7281	.7260	.7239	.7217	.7196	.7175	.7154	.7133	.7112	.7091	.7071	.7050
60.00	.7029	.7009	.6988	.6967	.6947	.6927	.6906	.6886	.6866	.6846	.6826	.6806
66.00	.6786	.6766	.6746	.6726	.6706	.6687	.6667	.6648	.6628	.6609	.6589	.6570
72.00	.6551	.6531	.6512	.6493	.6474	.6455	.6436	.6417	.6399	.6380	.6361	.6342
78.00	.6324	.6305	.6287	.6268	.6250	.6232	.6213	.6195	.6177	.6159	.6141	.6123
84.00	.6105	.6087	.6069	.6051	.6033	.6016	.5998	.5981	.5963	.5946	.5928	.5911
90.00	.5893	.5876	.5859	.5842	.5825	.5807	.5790	.5773	.5757	.5740	.5723	.5706
96.00	.5689	.5673	.5656	.5639	.5622	.5606	.5590	.5573	.5557	.5541	.5525	.5508
102.00	.5492	.5476	.5460	.5444	.5428	.5412	.5396	.5380	.5365	.5349	.5333	.5318
108.00	.5302	.5286	.5271	.5255	.5240	.5225	.5209	.5194	.5179	.5164	.5149	.5133
114.00	.5118	.5103	.5088	.5073	.5059	.5044	.5029	.5014	.5000	.4985	.4970	.4956
120.00	.4941	.4927	.4912	.4898	.4883	.4869	.4855	.4841	.4826	.4812	.4798	.4784
126.00	.4770	.4756	.4742	.4728	.4714	.4700	.4687	.4673	.4659	.4646	.4632	.4618
132.00	.4605	.4591	.4578	.4564	.4551	.4538	.4524	.4511	.4498	.4485	.4471	.4458
138.00	.4445	.4432	.4419	.4406	.4393	.4380	.4368	.4355	.4342	.4329	.4317	.4304
144.00	.4291	.4279	.4266	.4254	.4241	.4229	.4216	.4204	.4192	.4179	.4167	.4155
150.00	.4143	.4131	.4118	.4106	.4094	.4082	.4070	.4058	.4046	.4035	.4023	.4011
156.00	.3999	.3987	.3976	.3964	.3952	.3941	.3929	.3918	.3906	.3895	.3883	.3872
162.00	.3861	.3849	.3838	.3827	.3816	.3804	.3793	.3782	.3771	.3760	.3749	.3738
168.00	.3727	.3716	.3705	.3694	.3683	.3673	.3662	.3651	.3640	.3630	.3619	.3608
174.00	.3598	.3587	.3577	.3566	.3556	.3545	.3535	.3525	.3514	.3504	.3494	.3483
180.00	.3473	.3463	.3453	.3443	.3433	.3423	.3413	.3403	.3393	.3383	.3373	.3363
186.00	.3353	.3343	.3333	.3324	.3314	.3304	.3294	.3285	.3275	.3265	.3256	.3246
192.00	.3237	.3227	.3218	.3208	.3199	.3190	.3180	.3171	.3162	.3152	.3143	.3134
198.00	.3125	.3116	.3106	.3097	.3088	.3079	.3070	.3061	.3052	.3043	.3034	.3025
204.00	.3016	.3008	.2999	.2990	.2981	.2973	.2964	.2955	.2946	.2938	.2929	.2921
210.00	.2912	.2903	.2895	.2886	.2878	.2870	.2861	.2853	.2844	.2836	.2828	.2819
216.00	.2811	.2803	.2795	.2786	.2778	.2770	.2762	.2754	.2746	.2738	.2730	.2722
222.00	.2714	.2706	.2698	.2690	.2682	.2674	.2666	.2659	.2651	.2643	.2635	.2627
228.00	.2620	.2612	.2604	.2597	.2589	.2582	.2574	.2566	.2559	.2551	.2544	.2536
234.00	.2529	.2522	.2514	.2507	.2500	.2492	.2485	.2478	.2470	.2463	.2456	.2449

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HALF-LIFE 116.00 DAYS CALCULATION INTERVAL 12.0 HOURS

DAYS	HOURS 0.0	12.0	24.0	36.0	48.0	60.0	72.0	84.0	96.0	108.0	120.0	132.0
240.00	.2441	.2434	.2427	.2420	.2413	.2406	.2399	.2392	.2385	.2378	.2371	.2364
246.00	.2357	.2350	.2343	.2336	.2329	.2323	.2316	.2309	.2302	.2295	.2289	.2282
252.00	.2275	.2269	.2262	.2255	.2249	.2242	.2235	.2229	.2222	.2216	.2209	.2203
258.00	.2196	.2190	.2184	.2177	.2171	.2164	.2158	.2152	.2145	.2139	.2133	.2127
264.00	.2120	.2114	.2109	.2102	.2096	.2089	.2083	.2077	.2071	.2065	.2059	.2053
270.00	.2047	.2041	.2035	.2029	.2023	.2017	.2011	.2005	.1999	.1993	.1988	.1982
276.00	.1976	.1970	.1964	.1959	.1953	.1947	.1941	.1936	.1930	.1924	.1919	.1913
282.00	.1908	.1902	.1896	.1891	.1885	.1880	.1874	.1869	.1863	.1858	.1852	.1847
288.00	.1841	.1836	.1831	.1825	.1820	.1815	.1809	.1804	.1799	.1793	.1788	.1783
294.00	.1778	.1772	.1767	.1762	.1757	.1752	.1747	.1741	.1736	.1731	.1726	.1721
300.00	.1716	.1711	.1706	.1701	.1696	.1691	.1686	.1681	.1676	.1671	.1666	.1662
306.00	.1657	.1652	.1647	.1642	.1637	.1633	.1628	.1623	.1618	.1613	.1609	.1604
312.00	.1599	.1595	.1590	.1585	.1581	.1576	.1571	.1567	.1562	.1558	.1553	.1548
318.00	.1544	.1539	.1535	.1530	.1526	.1521	.1517	.1512	.1508	.1504	.1499	.1495
324.00	.1490	.1486	.1482	.1477	.1473	.1469	.1464	.1460	.1456	.1451	.1447	.1443
330.00	.1439	.1435	.1430	.1426	.1422	.1418	.1414	.1409	.1405	.1401	.1397	.1393
336.00	.1389	.1385	.1381	.1377	.1373	.1369	.1365	.1361	.1357	.1353	.1349	.1345
342.00	.1341	.1337	.1333	.1329	.1325	.1321	.1317	.1313	.1310	.1306	.1302	.1298
348.00	.1294	.1291	.1287	.1283	.1279	.1275	.1272	.1268	.1264	.1261	.1257	.1253
354.00	.1250	.1246	.1242	.1239	.1235	.1231	.1229	.1224	.1220	.1217	.1213	.1210
360.00	.1206	.1203	.1199	.1196	.1192	.1189	.1185	.1182	.1178	.1175	.1171	.1168
366.00	.1164	.1161	.1158	.1154	.1151	.1147	.1144	.1141	.1137	.1134	.1131	.1127
372.00	.1124	.1121	.1117	.1114	.1111	.1108	.1104	.1101	.1098	.1095	.1092	.1088
378.00	.1085	.1082	.1079	.1076	.1072	.1069	.1066	.1063	.1060	.1057	.1054	.1051
384.00	.1048	.1044	.1041	.1038	.1035	.1032	.1029	.1026	.1023	.1020	.1017	.1014
390.00	.1011	.1008	.1005	.1002	.0999	.0996	.0994	.0991	.0988	.0985	.0982	.0979

U - 237

HALF-LIFE 6.75 DAYS CALCULATION INTERVAL 1.0 HOURS

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.00	1.0000	.9957	.9914	.9872	.9830	.9788	.9746	.9704	.9663	.9622	.9581	.9540
.50	.9499	.9458	.9418	.9378	.9338	.9298	.9258	.9219	.9179	.9140	.9101	.9062
1.00	.9024	.8985	.8947	.8908	.8870	.8833	.8795	.8757	.8720	.8683	.8646	.8609
1.50	.8572	.8535	.8499	.8463	.8426	.8390	.8355	.8319	.8283	.8248	.8213	.8178
2.00	.8143	.8108	.8074	.8039	.8005	.7971	.7937	.7903	.7869	.7835	.7802	.7769
2.50	.7735	.7702	.7669	.7637	.7604	.7572	.7539	.7507	.7475	.7443	.7411	.7380
3.00	.7348	.7317	.7286	.7254	.7223	.7193	.7162	.7131	.7101	.7071	.7040	.7010
3.50	.6980	.6951	.6921	.6891	.6862	.6833	.6803	.6774	.6745	.6717	.6688	.6659
4.00	.6631	.6603	.6574	.6546	.6518	.6491	.6463	.6435	.6408	.6380	.6353	.6326
4.50	.6299	.6272	.6245	.6219	.6192	.6166	.6139	.6113	.6087	.6061	.6035	.6009
5.00	.5984	.5958	.5933	.5908	.5882	.5857	.5832	.5807	.5782	.5758	.5733	.5709
5.50	.5684	.5660	.5636	.5612	.5588	.5564	.5540	.5517	.5493	.5470	.5446	.5423
6.00	.5400	.5377	.5354	.5331	.5308	.5285	.5263	.5240	.5218	.5196	.5174	.5152
6.50	.5130	.5108	.5086	.5064	.5042	.5021	.5000	.4978	.4957	.4936	.4915	.4894
7.00	.4873	.4852	.4831	.4811	.4790	.4770	.4749	.4729	.4709	.4689	.4669	.4649
7.50	.4629	.4609	.4589	.4570	.4550	.4531	.4512	.4492	.4473	.4454	.4435	.4416
8.00	.4397	.4378	.4360	.4341	.4323	.4304	.4286	.4267	.4249	.4231	.4213	.4195
8.50	.4177	.4159	.4141	.4124	.4106	.4089	.4071	.4054	.4037	.4019	.4002	.3985
9.00	.3968	.3951	.3934	.3917	.3901	.3884	.3867	.3851	.3834	.3818	.3802	.3786
9.50	.3769	.3753	.3737	.3721	.3705	.3690	.3674	.3658	.3643	.3627	.3611	.3596
10.00	.3581	.3565	.3550	.3535	.3520	.3505	.3490	.3475	.3460	.3445	.3431	.3416
10.50	.3401	.3387	.3372	.3358	.3344	.3329	.3315	.3301	.3287	.3273	.3259	.3245
11.00	.3231	.3217	.3204	.3190	.3176	.3163	.3149	.3136	.3122	.3109	.3096	.3083
11.50	.3069	.3056	.3043	.3030	.3017	.3005	.2992	.2979	.2966	.2954	.2941	.2928
12.00	.2916	.2903	.2891	.2879	.2866	.2854	.2842	.2830	.2818	.2806	.2794	.2782
12.50	.2770	.2758	.2746	.2735	.2723	.2711	.2700	.2688	.2677	.2665	.2654	.2643
13.00	.2631	.2620	.2609	.2598	.2587	.2576	.2565	.2554	.2543	.2532	.2521	.2510
13.50	.2500	.2489	.2478	.2468	.2457	.2447	.2436	.2426	.2415	.2405	.2395	.2385
14.00	.2374	.2364	.2354	.2344	.2334	.2324	.2314	.2304	.2294	.2285	.2275	.2265
14.50	.2256	.2246	.2236	.2227	.2217	.2208	.2198	.2189	.2180	.2170	.2161	.2152
15.00	.2143	.2133	.2124	.2115	.2106	.2097	.2088	.2079	.2071	.2062	.2053	.2044
15.50	.2035	.2027	.2018	.2009	.2001	.1992	.1984	.1975	.1967	.1958	.1950	.1942
16.00	.1933	.1925	.1917	.1909	.1901	.1893	.1884	.1876	.1868	.1860	.1852	.1845
16.50	.1837	.1829	.1821	.1813	.1806	.1798	.1790	.1782	.1775	.1767	.1760	.1752
17.00	.1745	.1737	.1730	.1722	.1715	.1708	.1701	.1693	.1686	.1679	.1672	.1665
17.50	.1657	.1650	.1643	.1636	.1629	.1622	.1615	.1608	.1602	.1595	.1588	.1581
18.00	.1574	.1568	.1561	.1554	.1548	.1541	.1535	.1528	.1521	.1515	.1508	.1502
18.50	.1496	.1489	.1483	.1477	.1470	.1464	.1458	.1451	.1445	.1439	.1433	.1427
19.00	.1421	.1415	.1409	.1403	.1397	.1391	.1385	.1379	.1373	.1367	.1361	.1355
19.50	.1350	.1344	.1338	.1332	.1327	.1321	.1315	.1310	.1304	.1299	.1293	.1288
20.00	.1282	.1277	.1271	.1266	.1260	.1255	.1250	.1244	.1239	.1234	.1228	.1223
20.50	.1218	.1213	.1207	.1202	.1197	.1192	.1187	.1182	.1177	.1172	.1167	.1162
21.00	.1157	.1152	.1147	.1142	.1137	.1132	.1128	.1123	.1118	.1113	.1108	.1104
21.50	.1099	.1094	.1090	.1085	.1080	.1076	.1071	.1067	.1062	.1057	.1053	.1048
22.00	.1044	.1039	.1035	.1031	.1026	.1022	.1017	.1013	.1009	.1004	.1000	.0996

W - 181

HALF-LIFE 130.00 DAYS CALCULATION INTERVAL 1.0 DAYS

DAYS	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.00	1.0000	.9946	.9893	.9841	.9788	.9736	.9685	.9633	.9582	.9531
10.00	.9480	.9430	.9380	.9330	.9280	.9231	.9182	.9133	.9084	.9036
20.00	.8988	.8940	.8893	.8845	.8798	.8752	.8705	.8659	.8613	.8567
30.00	.8521	.8476	.8431	.8386	.8341	.8297	.8253	.8209	.8165	.8122
40.00	.8079	.8036	.7993	.7951	.7908	.7866	.7824	.7783	.7741	.7700
50.00	.7659	.7619	.7578	.7538	.7498	.7458	.7418	.7379	.7339	.7300
60.00	.7262	.7223	.7185	.7146	.7108	.7071	.7033	.6996	.6958	.6921
70.00	.6885	.6848	.6812	.6775	.6739	.6703	.6668	.6632	.6597	.6562
80.00	.6527	.6492	.6458	.6423	.6389	.6355	.6322	.6288	.6254	.6221
90.00	.6188	.6155	.6122	.6090	.6058	.6025	.5993	.5961	.5930	.5898
100.00	.5867	.5836	.5805	.5774	.5743	.5712	.5682	.5652	.5622	.5592
110.00	.5562	.5533	.5503	.5474	.5445	.5416	.5387	.5358	.5330	.5302
120.00	.5273	.5245	.5217	.5190	.5162	.5135	.5107	.5080	.5053	.5026
130.00	.5000	.4973	.4946	.4920	.4894	.4868	.4842	.4816	.4791	.4765
140.00	.4740	.4715	.4690	.4665	.4640	.4615	.4591	.4566	.4542	.4518
150.00	.4494	.4470	.4446	.4422	.4399	.4376	.4352	.4329	.4306	.4283
160.00	.4260	.4238	.4215	.4193	.4170	.4148	.4126	.4104	.4082	.4061
170.00	.4039	.4018	.3996	.3975	.3954	.3933	.3912	.3891	.3870	.3850
180.00	.3829	.3809	.3789	.3769	.3749	.3729	.3709	.3689	.3669	.3650
190.00	.3631	.3611	.3592	.3573	.3554	.3535	.3516	.3498	.3479	.3460
200.00	.3442	.3424	.3406	.3387	.3369	.3351	.3334	.3316	.3298	.3281
210.00	.3263	.3246	.3229	.3211	.3194	.3177	.3161	.3144	.3127	.3110
220.00	.3094	.3077	.3061	.3045	.3029	.3013	.2996	.2980	.2965	.2949
230.00	.2933	.2918	.2902	.2887	.2871	.2856	.2841	.2826	.2811	.2796
240.00	.2781	.2766	.2751	.2737	.2723	.2708	.2693	.2679	.2665	.2651
250.00	.2636	.2622	.2608	.2595	.2581	.2567	.2553	.2540	.2526	.2513
260.00	.2500	.2486	.2473	.2460	.2447	.2434	.2421	.2408	.2395	.2382
270.00	.2370	.2357	.2345	.2332	.2320	.2307	.2295	.2283	.2271	.2259
280.00	.2247	.2235	.2223	.2211	.2199	.2188	.2176	.2164	.2153	.2141
290.00	.2130	.2119	.2107	.2096	.2085	.2074	.2063	.2052	.2041	.2030
300.00	.2019	.2009	.1998	.1987	.1977	.1966	.1956	.1945	.1935	.1925
310.00	.1914	.1904	.1894	.1884	.1874	.1864	.1854	.1844	.1834	.1825
320.00	.1815	.1805	.1796	.1786	.1777	.1767	.1758	.1749	.1739	.1730
330.00	.1721	.1712	.1703	.1693	.1684	.1675	.1667	.1658	.1649	.1640
340.00	.1631	.1623	.1614	.1605	.1597	.1588	.1580	.1572	.1563	.1555
350.00	.1547	.1538	.1530	.1522	.1514	.1506	.1498	.1490	.1482	.1474
360.00	.1466	.1459	.1451	.1443	.1435	.1428	.1420	.1413	.1405	.1398
370.00	.1390	.1383	.1375	.1368	.1361	.1354	.1346	.1339	.1332	.1325
380.00	.1318	.1311	.1304	.1297	.1290	.1283	.1276	.1270	.1263	.1256
390.00	.1250	.1243	.1236	.1230	.1223	.1217	.1210	.1204	.1197	.1191
400.00	.1185	.1178	.1172	.1166	.1160	.1153	.1147	.1141	.1135	.1129
410.00	.1123	.1117	.1111	.1105	.1099	.1094	.1088	.1082	.1076	.1070
420.00	.1065	.1059	.1053	.1048	.1042	.1037	.1031	.1026	.1020	.1015
430.00	.1009	.1004	.0999	.0993	.0988	.0983	.0978	.0972	.0967	.0962

W - 185

HALF-LIFE 74.00 DAYS CALCULATION INTERVAL .5 DAYS

DAYS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
0.00	1.0000	.9953	.9906	.9860	.9814	.9768	.9722	.9677	.9632	.9587
5.00	.9542	.9497	.9453	.9409	.9365	.9321	.9278	.9234	.9191	.9148
10.00	.9105	.9063	.9020	.8978	.8936	.8895	.8853	.8812	.8770	.8730
15.00	.8689	.8648	.8608	.8567	.8527	.8488	.8448	.8408	.8369	.8330
20.00	.8291	.8252	.8214	.8175	.8137	.8099	.8061	.8024	.7986	.7949
25.00	.7912	.7875	.7838	.7801	.7765	.7729	.7693	.7657	.7621	.7585
30.00	.7550	.7514	.7479	.7444	.7410	.7375	.7341	.7306	.7272	.7238
35.00	.7204	.7171	.7137	.7104	.7071	.7038	.7005	.6972	.6939	.6907
40.00	.6875	.6843	.6811	.6779	.6747	.6716	.6684	.6653	.6622	.6591
45.00	.6560	.6529	.6499	.6469	.6438	.6408	.6378	.6348	.6319	.6289
50.00	.6260	.6231	.6202	.6173	.6144	.6115	.6086	.6058	.6030	.6001
55.00	.5973	.5946	.5918	.5890	.5863	.5835	.5808	.5781	.5754	.5727
60.00	.5700	.5673	.5647	.5621	.5594	.5568	.5542	.5516	.5490	.5465
65.00	.5439	.5414	.5389	.5363	.5338	.5313	.5289	.5264	.5239	.5215
70.00	.5190	.5166	.5142	.5118	.5094	.5070	.5047	.5023	.5000	.4976
75.00	.4953	.4930	.4907	.4884	.4861	.4838	.4816	.4793	.4771	.4748
80.00	.4726	.4704	.4682	.4660	.4639	.4617	.4595	.4574	.4552	.4531
85.00	.4510	.4489	.4468	.4447	.4426	.4406	.4385	.4365	.4344	.4324
90.00	.4304	.4283	.4263	.4244	.4224	.4204	.4184	.4165	.4145	.4126
95.00	.4107	.4087	.4068	.4049	.4030	.4012	.3993	.3974	.3956	.3937
100.00	.3919	.3900	.3882	.3864	.3846	.3828	.3810	.3792	.3775	.3757
105.00	.3739	.3722	.3705	.3687	.3670	.3653	.3636	.3619	.3602	.3585
110.00	.3568	.3552	.3535	.3519	.3502	.3486	.3469	.3453	.3437	.3421
115.00	.3405	.3389	.3373	.3358	.3342	.3326	.3311	.3295	.3280	.3264
120.00	.3249	.3234	.3219	.3204	.3189	.3174	.3159	.3144	.3130	.3115
125.00	.3101	.3086	.3072	.3057	.3043	.3029	.3015	.3000	.2986	.2973
130.00	.2959	.2945	.2931	.2917	.2904	.2890	.2877	.2863	.2850	.2836
135.00	.2823	.2810	.2797	.2784	.2771	.2758	.2745	.2732	.2719	.2707
140.00	.2694	.2681	.2669	.2656	.2644	.2632	.2619	.2607	.2595	.2583
145.00	.2571	.2559	.2547	.2535	.2523	.2511	.2500	.2488	.2476	.2465
150.00	.2453	.2442	.2430	.2419	.2408	.2396	.2385	.2374	.2363	.2352
155.00	.2341	.2330	.2319	.2308	.2297	.2287	.2276	.2265	.2255	.2244
160.00	.2234	.2223	.2213	.2203	.2192	.2182	.2172	.2162	.2152	.2141
165.00	.2131	.2122	.2112	.2102	.2092	.2082	.2072	.2063	.2053	.2043
170.00	.2034	.2024	.2015	.2006	.1996	.1987	.1978	.1968	.1959	.1950
175.00	.1941	.1932	.1923	.1914	.1905	.1896	.1887	.1878	.1869	.1861
180.00	.1852	.1843	.1835	.1826	.1818	.1809	.1801	.1792	.1784	.1776
185.00	.1767	.1759	.1751	.1743	.1734	.1726	.1718	.1710	.1702	.1694
190.00	.1686	.1679	.1671	.1663	.1655	.1647	.1640	.1632	.1624	.1617
195.00	.1609	.1602	.1594	.1587	.1579	.1572	.1565	.1557	.1550	.1543

W - 185

HALF-LIFE 74.00 DAYS CALCULATION INTERVAL .5 DAYS

DAYS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
200.00	.1536	.1528	.1521	.1514	.1507	.1500	.1493	.1486	.1479	.1472
205.00	.1465	.1458	.1452	.1445	.1438	.1431	.1425	.1418	.1411	.1405
210.00	.1398	.1392	.1385	.1379	.1372	.1366	.1359	.1353	.1347	.1340
215.00	.1334	.1328	.1322	.1316	.1309	.1303	.1297	.1291	.1285	.1279
220.00	.1273	.1267	.1261	.1255	.1250	.1244	.1238	.1232	.1226	.1221
225.00	.1215	.1209	.1204	.1198	.1192	.1187	.1181	.1176	.1170	.1165
230.00	.1159	.1154	.1148	.1143	.1138	.1132	.1127	.1122	.1117	.1111
235.00	.1106	.1101	.1096	.1091	.1086	.1081	.1076	.1070	.1065	.1061
240.00	.1056	.1051	.1046	.1041	.1036	.1031	.1026	.1021	.1017	.1012
245.00	.1007	.1003	.0998	.0993	.0989	.0984	.0979	.0975	.0970	.0966

W - 187

HALF-LIFE 24.00 HOURS CALCULATION INTERVAL 5.0 MINUTES

HOURS	MINUTES 0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0
0.00	1.0000	.9975	.9951	.9928	.9904	.9880	.9856	.9832	.9809	.9785	.9762	.9738
1.00	.9715	.9691	.9668	.9645	.9622	.9599	.9576	.9553	.9530	.9507	.9484	.9461
2.00	.9438	.9416	.9393	.9370	.9348	.9325	.9303	.9281	.9258	.9236	.9214	.9192
3.00	.9170	.9147	.9126	.9104	.9082	.9060	.9038	.9016	.8995	.8973	.8951	.8930
4.00	.8908	.8887	.8866	.8844	.8823	.8802	.8781	.8760	.8739	.8718	.8697	.8676
5.00	.8655	.8634	.8613	.8593	.8572	.8551	.8531	.8510	.8490	.8469	.8449	.8429
6.00	.8408	.8388	.8368	.8348	.8328	.8308	.8288	.8268	.8248	.8228	.8208	.8189
7.00	.8169	.8149	.8130	.8110	.8091	.8071	.8052	.8033	.8013	.7994	.7975	.7956
8.00	.7937	.7917	.7898	.7879	.7860	.7842	.7823	.7804	.7785	.7766	.7748	.7729
9.00	.7711	.7692	.7674	.7655	.7637	.7618	.7600	.7582	.7564	.7545	.7527	.7509
10.00	.7491	.7473	.7455	.7437	.7419	.7401	.7384	.7366	.7348	.7331	.7313	.7295
11.00	.7278	.7260	.7243	.7225	.7208	.7191	.7173	.7156	.7139	.7122	.7105	.7088
12.00	.7071	.7054	.7037	.7020	.7003	.6986	.6969	.6952	.6936	.6919	.6902	.6886
13.00	.6869	.6853	.6836	.6820	.6803	.6787	.6771	.6755	.6738	.6722	.6706	.6690
14.00	.6674	.6658	.6642	.6626	.6610	.6594	.6578	.6562	.6546	.6531	.6515	.6499
15.00	.6484	.6468	.6453	.6437	.6422	.6406	.6391	.6375	.6360	.6345	.6330	.6314
16.00	.6299	.6284	.6269	.6254	.6239	.6224	.6209	.6194	.6179	.6164	.6149	.6135
17.00	.6120	.6105	.6090	.6076	.6061	.6047	.6032	.6018	.6003	.5989	.5974	.5960
18.00	.5946	.5931	.5917	.5903	.5889	.5874	.5860	.5846	.5832	.5818	.5804	.5790
19.00	.5776	.5762	.5749	.5735	.5721	.5707	.5693	.5680	.5666	.5652	.5639	.5625
20.00	.5612	.5598	.5585	.5571	.5558	.5545	.5531	.5518	.5505	.5492	.5478	.5465
21.00	.5452	.5439	.5426	.5413	.5400	.5387	.5374	.5361	.5348	.5335	.5322	.5310
22.00	.5297	.5284	.5271	.5259	.5246	.5233	.5221	.5208	.5196	.5183	.5171	.5158
23.00	.5146	.5134	.5121	.5109	.5097	.5084	.5072	.5060	.5048	.5036	.5024	.5012
24.00	.5000	.4987	.4975	.4964	.4952	.4940	.4928	.4916	.4904	.4892	.4881	.4869
25.00	.4857	.4845	.4834	.4822	.4811	.4799	.4788	.4776	.4765	.4753	.4742	.4730
26.00	.4719	.4708	.4696	.4685	.4674	.4662	.4651	.4640	.4629	.4618	.4607	.4596
27.00	.4585	.4574	.4563	.4552	.4541	.4530	.4519	.4508	.4497	.4486	.4475	.4465
28.00	.4454	.4443	.4433	.4422	.4411	.4401	.4390	.4380	.4369	.4359	.4348	.4338
29.00	.4327	.4317	.4306	.4296	.4286	.4275	.4265	.4255	.4245	.4234	.4224	.4214
30.00	.4204	.4194	.4184	.4174	.4164	.4154	.4144	.4134	.4124	.4114	.4104	.4094
31.00	.4084	.4074	.4065	.4055	.4045	.4035	.4026	.4016	.4006	.3997	.3987	.3978
32.00	.3968	.3958	.3949	.3939	.3930	.3921	.3911	.3902	.3892	.3883	.3874	.3864
33.00	.3855	.3846	.3837	.3827	.3818	.3809	.3800	.3791	.3782	.3772	.3763	.3754
34.00	.3745	.3736	.3727	.3718	.3709	.3700	.3692	.3683	.3674	.3665	.3656	.3647
35.00	.3639	.3630	.3621	.3612	.3604	.3595	.3586	.3578	.3569	.3561	.3552	.3544
36.00	.3535	.3527	.3518	.3510	.3501	.3493	.3484	.3476	.3468	.3459	.3451	.3443
37.00	.3434	.3426	.3418	.3410	.3401	.3393	.3385	.3377	.3369	.3361	.3353	.3345
38.00	.3337	.3329	.3321	.3313	.3305	.3297	.3289	.3281	.3273	.3265	.3257	.3249
39.00	.3242	.3234	.3226	.3218	.3211	.3203	.3195	.3187	.3180	.3172	.3165	.3157

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HALF-LIFE 24.00 HOURS CALCULATION INTERVAL 5.0 MINUTES

HOURS	MINUTES 0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0
40.00	.3149	.3142	.3134	.3127	.3119	.3112	.3104	.3097	.3089	.3082	.3074	.3067
41.00	.3060	.3052	.3045	.3038	.3030	.3023	.3016	.3009	.3001	.2994	.2987	.2980
42.00	.2973	.2965	.2958	.2951	.2944	.2937	.2930	.2923	.2916	.2909	.2902	.2895
43.00	.2888	.2881	.2874	.2867	.2860	.2853	.2846	.2840	.2833	.2826	.2819	.2812
44.00	.2806	.2799	.2792	.2785	.2779	.2772	.2765	.2759	.2752	.2746	.2739	.2732
45.00	.2726	.2719	.2713	.2706	.2700	.2693	.2687	.2680	.2674	.2667	.2661	.2655
46.00	.2648	.2642	.2635	.2629	.2623	.2616	.2610	.2604	.2598	.2591	.2585	.2579
47.00	.2573	.2567	.2560	.2554	.2548	.2542	.2536	.2530	.2524	.2518	.2512	.2506
48.00	.2500	.2494	.2488	.2482	.2476	.2470	.2464	.2458	.2452	.2446	.2440	.2434
49.00	.2428	.2423	.2417	.2411	.2405	.2399	.2394	.2388	.2382	.2376	.2371	.2365
50.00	.2359	.2354	.2348	.2342	.2337	.2331	.2325	.2320	.2314	.2309	.2303	.2298
51.00	.2292	.2287	.2281	.2276	.2270	.2265	.2259	.2254	.2248	.2243	.2238	.2232
52.00	.2227	.2221	.2216	.2211	.2205	.2200	.2195	.2190	.2184	.2179	.2174	.2169
53.00	.2163	.2158	.2153	.2148	.2143	.2137	.2132	.2127	.2122	.2117	.2112	.2107
54.00	.2102	.2097	.2092	.2087	.2082	.2077	.2072	.2067	.2062	.2057	.2052	.2047
55.00	.2042	.2037	.2032	.2027	.2022	.2017	.2013	.2008	.2003	.1998	.1993	.1989
56.00	.1984	.1979	.1974	.1969	.1965	.1960	.1955	.1951	.1946	.1941	.1937	.1932
57.00	.1927	.1923	.1918	.1913	.1909	.1904	.1900	.1895	.1891	.1886	.1881	.1877
58.00	.1872	.1868	.1863	.1859	.1854	.1850	.1846	.1841	.1837	.1832	.1828	.1823
59.00	.1819	.1815	.1810	.1806	.1802	.1797	.1793	.1789	.1784	.1780	.1776	.1772
60.00	.1767	.1763	.1759	.1755	.1750	.1746	.1742	.1738	.1734	.1729	.1725	.1721
61.00	.1717	.1713	.1709	.1705	.1700	.1696	.1692	.1688	.1684	.1680	.1676	.1672
62.00	.1668	.1664	.1660	.1656	.1652	.1648	.1644	.1640	.1636	.1632	.1628	.1624
63.00	.1621	.1617	.1613	.1609	.1605	.1601	.1597	.1593	.1590	.1586	.1582	.1578
64.00	.1574	.1571	.1567	.1563	.1559	.1556	.1552	.1548	.1544	.1541	.1537	.1533
65.00	.1530	.1526	.1522	.1519	.1515	.1511	.1508	.1504	.1500	.1497	.1493	.1490
66.00	.1486	.1482	.1479	.1475	.1472	.1468	.1465	.1461	.1458	.1454	.1451	.1447
67.00	.1444	.1440	.1437	.1433	.1430	.1426	.1423	.1420	.1416	.1413	.1409	.1406
68.00	.1403	.1399	.1396	.1392	.1389	.1386	.1382	.1379	.1376	.1373	.1369	.1366
69.00	.1363	.1359	.1356	.1353	.1350	.1346	.1343	.1340	.1337	.1333	.1330	.1327
70.00	.1324	.1321	.1317	.1314	.1311	.1308	.1305	.1302	.1299	.1295	.1292	.1289
71.00	.1286	.1283	.1280	.1277	.1274	.1271	.1268	.1265	.1262	.1259	.1256	.1253
72.00	.1250	.1247	.1244	.1241	.1238	.1235	.1232	.1229	.1226	.1223	.1220	.1217
73.00	.1214	.1211	.1208	.1205	.1202	.1199	.1197	.1194	.1191	.1188	.1185	.1182
74.00	.1179	.1177	.1174	.1171	.1168	.1165	.1162	.1160	.1157	.1154	.1151	.1149
75.00	.1146	.1143	.1140	.1138	.1135	.1132	.1129	.1127	.1124	.1121	.1119	.1116
76.00	.1113	.1110	.1108	.1105	.1102	.1100	.1097	.1095	.1092	.1089	.1087	.1084
77.00	.1081	.1079	.1076	.1074	.1071	.1068	.1066	.1063	.1061	.1058	.1056	.1053
78.00	.1051	.1048	.1046	.1043	.1041	.1038	.1036	.1033	.1031	.1028	.1026	.1023
79.00	.1021	.1018	.1016	.1013	.1011	.1008	.1006	.1004	.1001	.0999	.0996	.0994

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HALF-LIFE 32.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
0.00	1.0000	.9945	.9892	.9838	.9785	.9732	.9680	.9628	.9576	.9524	.9472	.9421
3.00	.9370	.9320	.9269	.9219	.9170	.9120	.9071	.9022	.8973	.8925	.8876	.8828
6.00	.8781	.8733	.8686	.8639	.8593	.8546	.8500	.8454	.8408	.8363	.8318	.8273
9.00	.8228	.8184	.8140	.8096	.8052	.8008	.7965	.7922	.7879	.7837	.7795	.7752
12.00	.7711	.7669	.7627	.7586	.7545	.7505	.7464	.7424	.7384	.7344	.7304	.7265
15.00	.7225	.7186	.7148	.7109	.7071	.7032	.6994	.6957	.6919	.6882	.6845	.6808
18.00	.6771	.6734	.6698	.6662	.6626	.6590	.6554	.6519	.6484	.6449	.6414	.6379
21.00	.6345	.6310	.6276	.6243	.6209	.6175	.6142	.6109	.6076	.6043	.6010	.5978
24.00	.5946	.5913	.5881	.5850	.5818	.5787	.5755	.5724	.5693	.5663	.5632	.5602
27.00	.5571	.5541	.5511	.5482	.5452	.5423	.5393	.5364	.5335	.5306	.5278	.5249
30.00	.5221	.5193	.5165	.5137	.5109	.5081	.5054	.5027	.5000	.4972	.4946	.4919
33.00	.4892	.4866	.4840	.4814	.4788	.4762	.4736	.4710	.4685	.4660	.4634	.4609
36.00	.4585	.4560	.4535	.4511	.4486	.4462	.4438	.4414	.4390	.4366	.4343	.4319
39.00	.4296	.4273	.4250	.4227	.4204	.4181	.4159	.4136	.4114	.4092	.4070	.4048
42.00	.4026	.4004	.3982	.3961	.3939	.3918	.3897	.3876	.3855	.3834	.3813	.3793
45.00	.3772	.3752	.3732	.3712	.3692	.3672	.3652	.3632	.3612	.3593	.3574	.3554
48.00	.3535	.3516	.3497	.3478	.3459	.3441	.3422	.3404	.3385	.3367	.3349	.3331
51.00	.3313	.3295	.3277	.3259	.3242	.3224	.3207	.3189	.3172	.3155	.3138	.3121
54.00	.3104	.3087	.3071	.3054	.3038	.3021	.3005	.2989	.2973	.2956	.2940	.2925
57.00	.2909	.2893	.2877	.2862	.2846	.2831	.2816	.2801	.2785	.2770	.2755	.2741
60.00	.2726	.2711	.2696	.2682	.2667	.2653	.2639	.2624	.2610	.2596	.2582	.2568
63.00	.2554	.2540	.2527	.2513	.2500	.2486	.2473	.2459	.2446	.2433	.2420	.2407
66.00	.2394	.2381	.2368	.2355	.2342	.2330	.2317	.2304	.2292	.2280	.2267	.2255
69.00	.2243	.2231	.2219	.2207	.2195	.2183	.2171	.2159	.2148	.2136	.2125	.2113
72.00	.2102	.2090	.2079	.2068	.2057	.2046	.2035	.2024	.2013	.2002	.1991	.1980
75.00	.1969	.1959	.1948	.1938	.1927	.1917	.1906	.1896	.1886	.1876	.1866	.1856
78.00	.1846	.1836	.1826	.1816	.1806	.1796	.1787	.1777	.1767	.1758	.1748	.1739
81.00	.1729	.1720	.1711	.1702	.1692	.1683	.1674	.1665	.1656	.1647	.1638	.1629
84.00	.1621	.1612	.1603	.1594	.1586	.1577	.1569	.1560	.1552	.1543	.1535	.1527
87.00	.1519	.1510	.1502	.1494	.1486	.1478	.1470	.1462	.1454	.1446	.1438	.1431
90.00	.1423	.1415	.1408	.1400	.1392	.1385	.1377	.1370	.1363	.1355	.1348	.1341
93.00	.1333	.1326	.1319	.1312	.1305	.1298	.1291	.1284	.1277	.1270	.1263	.1256
96.00	.1250	.1243	.1236	.1229	.1223	.1216	.1210	.1203	.1197	.1190	.1184	.1177
99.00	.1171	.1165	.1158	.1152	.1146	.1140	.1133	.1127	.1121	.1115	.1109	.1103
102.00	.1097	.1091	.1085	.1079	.1074	.1068	.1062	.1056	.1051	.1045	.1039	.1034
105.00	.1028	.1023	.1017	.1012	.1006	.1001	.0995	.0990	.0984	.0979	.0974	.0969

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HALF-LIFE 108.00 DAYS CALCULATION INTERVAL 12.0 HOURS

DAYS	HOURS 0.0	12.0	24.0	36.0	48.0	60.0	72.0	84.0	96.0	108.0	120.0	132.0
0.00	1.0000	.9967	.9936	.9904	.9872	.9840	.9809	.9777	.9746	.9715	.9684	.9653
6.00	.9622	.9591	.9560	.9530	.9499	.9469	.9438	.9408	.9378	.9348	.9318	.9288
12.00	.9258	.9229	.9199	.9170	.9140	.9111	.9082	.9053	.9024	.8995	.8966	.8937
18.00	.8908	.8880	.8851	.8823	.8795	.8767	.8739	.8711	.8683	.8655	.8627	.8599
24.00	.8572	.8544	.8517	.8490	.8463	.8435	.8408	.8382	.8355	.8328	.8301	.8275
30.00	.8248	.8222	.8195	.8169	.8143	.8117	.8091	.8065	.8039	.8013	.7988	.7962
36.00	.7937	.7911	.7886	.7860	.7835	.7810	.7785	.7760	.7735	.7711	.7686	.7661
42.00	.7637	.7612	.7588	.7564	.7539	.7515	.7491	.7467	.7443	.7419	.7395	.7372
48.00	.7348	.7325	.7301	.7278	.7254	.7231	.7208	.7185	.7162	.7139	.7116	.7093
54.00	.7071	.7048	.7025	.7003	.6980	.6958	.6936	.6914	.6891	.6869	.6847	.6825
60.00	.6803	.6782	.6760	.6738	.6717	.6695	.6674	.6652	.6631	.6610	.6589	.6567
66.00	.6546	.6525	.6505	.6484	.6463	.6442	.6422	.6401	.6380	.6360	.6340	.6319
72.00	.6299	.6279	.6259	.6239	.6219	.6199	.6179	.6159	.6139	.6120	.6100	.6081
78.00	.6061	.6042	.6022	.6003	.5984	.5965	.5946	.5926	.5907	.5889	.5870	.5851
84.00	.5832	.5813	.5795	.5776	.5758	.5739	.5721	.5703	.5684	.5666	.5648	.5630
90.00	.5612	.5594	.5576	.5558	.5540	.5522	.5505	.5487	.5470	.5452	.5435	.5417
96.00	.5400	.5382	.5365	.5348	.5331	.5314	.5297	.5280	.5263	.5246	.5229	.5212
102.00	.5196	.5179	.5163	.5146	.5130	.5113	.5097	.5080	.5064	.5048	.5032	.5016
108.00	.5000	.4983	.4968	.4952	.4936	.4920	.4904	.4888	.4873	.4857	.4842	.4826
114.00	.4811	.4795	.4780	.4765	.4749	.4734	.4719	.4704	.4689	.4674	.4659	.4644
120.00	.4629	.4614	.4599	.4585	.4570	.4555	.4541	.4526	.4512	.4497	.4483	.4468
126.00	.4454	.4440	.4425	.4411	.4397	.4383	.4369	.4355	.4341	.4327	.4313	.4299
132.00	.4286	.4272	.4258	.4245	.4231	.4217	.4204	.4191	.4177	.4164	.4150	.4137
138.00	.4124	.4111	.4097	.4084	.4071	.4058	.4045	.4032	.4019	.4006	.3994	.3981
144.00	.3968	.3955	.3943	.3930	.3917	.3905	.3892	.3880	.3867	.3855	.3843	.3830
150.00	.3818	.3806	.3794	.3782	.3769	.3757	.3745	.3733	.3721	.3709	.3697	.3686
156.00	.3674	.3662	.3650	.3639	.3627	.3615	.3604	.3592	.3581	.3569	.3558	.3546
162.00	.3535	.3524	.3512	.3501	.3490	.3479	.3468	.3457	.3445	.3434	.3423	.3412
168.00	.3401	.3391	.3380	.3369	.3358	.3347	.3337	.3326	.3315	.3305	.3294	.3283
174.00	.3273	.3262	.3252	.3242	.3231	.3221	.3211	.3200	.3190	.3180	.3170	.3159
180.00	.3149	.3139	.3129	.3119	.3109	.3099	.3089	.3079	.3069	.3060	.3050	.3040
186.00	.3030	.3021	.3011	.3001	.2992	.2982	.2973	.2963	.2953	.2944	.2935	.2925
192.00	.2916	.2906	.2897	.2888	.2879	.2869	.2860	.2851	.2842	.2833	.2824	.2815
198.00	.2806	.2797	.2788	.2779	.2770	.2761	.2752	.2743	.2735	.2726	.2717	.2708
204.00	.2700	.2691	.2682	.2674	.2665	.2657	.2648	.2640	.2631	.2623	.2614	.2606
210.00	.2598	.2589	.2581	.2573	.2565	.2556	.2548	.2540	.2532	.2524	.2516	.2508
216.00	.2500	.2491	.2484	.2476	.2468	.2460	.2452	.2444	.2436	.2428	.2421	.2413
222.00	.2405	.2397	.2390	.2382	.2374	.2367	.2359	.2352	.2344	.2337	.2329	.2322
228.00	.2314	.2307	.2299	.2292	.2285	.2277	.2270	.2263	.2256	.2248	.2241	.2234
234.00	.2227	.2220	.2212	.2205	.2198	.2191	.2184	.2177	.2170	.2163	.2156	.2149

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HALF-LIFE 108.00 DAYS CALCULATION INTERVAL 12.0 HOURS

DAYS	HOURS 0.0	12.0	24.0	36.0	48.0	60.0	72.0	84.0	96.0	108.0	120.0	132.0
240.00	.2143	.2136	.2129	.2122	.2115	.2108	.2102	.2095	.2088	.2082	.2075	.2068
246.00	.2062	.2055	.2048	.2042	.2035	.2029	.2022	.2016	.2009	.2003	.1997	.1990
252.00	.1984	.1977	.1971	.1965	.1958	.1952	.1946	.1940	.1933	.1927	.1921	.1915
258.00	.1909	.1903	.1897	.1891	.1884	.1878	.1872	.1866	.1860	.1854	.1848	.1843
264.00	.1837	.1831	.1825	.1819	.1813	.1807	.1802	.1796	.1790	.1784	.1779	.1773
270.00	.1767	.1762	.1756	.1750	.1745	.1739	.1734	.1728	.1722	.1717	.1711	.1706
276.00	.1700	.1695	.1690	.1684	.1679	.1673	.1668	.1663	.1657	.1652	.1647	.1641
282.00	.1636	.1631	.1626	.1621	.1615	.1610	.1605	.1600	.1595	.1590	.1585	.1579
288.00	.1574	.1569	.1564	.1559	.1554	.1549	.1544	.1539	.1534	.1530	.1525	.1520
294.00	.1515	.1510	.1505	.1500	.1496	.1491	.1486	.1481	.1476	.1472	.1467	.1462
300.00	.1458	.1453	.1448	.1444	.1439	.1434	.1430	.1425	.1421	.1416	.1412	.1407
306.00	.1403	.1398	.1394	.1389	.1385	.1380	.1376	.1371	.1367	.1363	.1358	.1354
312.00	.1350	.1345	.1341	.1337	.1332	.1328	.1324	.1320	.1315	.1311	.1307	.1303
318.00	.1299	.1294	.1290	.1286	.1282	.1278	.1274	.1270	.1266	.1262	.1258	.1254
324.00	.1250	.1245	.1242	.1238	.1234	.1230	.1226	.1222	.1218	.1214	.1210	.1206
330.00	.1202	.1198	.1195	.1191	.1187	.1183	.1179	.1176	.1172	.1168	.1164	.1161
336.00	.1157	.1153	.1149	.1146	.1142	.1138	.1135	.1131	.1128	.1124	.1120	.1117
342.00	.1113	.1110	.1106	.1102	.1099	.1095	.1092	.1088	.1085	.1081	.1078	.1074
348.00	.1071	.1068	.1064	.1061	.1057	.1054	.1051	.1047	.1044	.1041	.1037	.1034
354.00	.1031	.1027	.1024	.1021	.1017	.1014	.1011	.1008	.1004	.1001	.0998	.0995

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HALF-LIFE 64.40 HOURS CALCULATION INTERVAL .5 HOURS

HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
					HOURS					
0.0	1.0000	.9946	.9892	.9839	.9787	.9734	.9682	.9630	.9578	.9527
5.0	.9476	.9425	.9374	.9324	.9274	.9224	.9174	.9125	.9076	.9028
10.0	.8979	.8931	.8883	.8835	.8788	.8741	.8694	.8647	.8601	.8555
15.0	.8509	.8463	.8418	.8372	.8327	.8283	.8238	.8194	.8150	.8106
20.0	.8063	.8020	.7976	.7934	.7891	.7849	.7807	.7765	.7723	.7682
25.0	.7640	.7599	.7559	.7518	.7478	.7437	.7398	.7358	.7318	.7279
30.0	.7240	.7201	.7162	.7124	.7086	.7048	.7010	.6972	.6935	.6898
35.0	.6861	.6824	.6787	.6751	.6715	.6678	.6643	.6607	.6572	.6536
40.0	.6501	.6466	.6432	.6397	.6363	.6329	.6295	.6261	.6227	.6194
45.0	.6161	.6127	.6095	.6062	.6029	.5997	.5965	.5933	.5901	.5869
50.0	.5838	.5806	.5775	.5744	.5713	.5683	.5652	.5622	.5592	.5562
55.0	.5532	.5502	.5473	.5443	.5414	.5385	.5356	.5327	.5299	.5270
60.0	.5242	.5214	.5186	.5158	.5130	.5103	.5075	.5048	.5021	.4994
65.0	.4967	.4941	.4914	.4888	.4862	.4835	.4809	.4784	.4758	.4732
70.0	.4707	.4682	.4657	.4632	.4607	.4582	.4557	.4533	.4509	.4484
75.0	.4460	.4436	.4413	.4389	.4365	.4342	.4319	.4295	.4272	.4249
80.0	.4227	.4204	.4181	.4159	.4137	.4114	.4092	.4070	.4049	.4027
85.0	.4005	.3984	.3962	.3941	.3920	.3899	.3878	.3857	.3836	.3816
90.0	.3795	.3775	.3755	.3735	.3714	.3695	.3675	.3655	.3635	.3616
95.0	.3596	.3577	.3558	.3539	.3520	.3501	.3482	.3463	.3445	.3426
100.0	.3408	.3390	.3372	.3353	.3335	.3317	.3300	.3282	.3264	.3247
105.0	.3229	.3212	.3195	.3178	.3161	.3144	.3127	.3110	.3093	.3077
110.0	.3060	.3044	.3027	.3011	.2995	.2979	.2963	.2947	.2931	.2915
115.0	.2900	.2884	.2869	.2853	.2838	.2823	.2808	.2793	.2778	.2763
120.0	.2748	.2733	.2718	.2704	.2689	.2675	.2661	.2646	.2632	.2618
125.0	.2604	.2590	.2576	.2562	.2548	.2535	.2521	.2508	.2494	.2481
130.0	.2467	.2454	.2441	.2428	.2415	.2402	.2389	.2376	.2363	.2351
135.0	.2338	.2326	.2313	.2301	.2288	.2276	.2264	.2252	.2240	.2228
140.0	.2216	.2204	.2192	.2180	.2168	.2157	.2145	.2134	.2122	.2111
145.0	.2099	.2088	.2077	.2066	.2055	.2044	.2033	.2022	.2011	.2000
150.0	.1989	.1979	.1968	.1958	.1947	.1937	.1926	.1916	.1906	.1895
155.0	.1885	.1875	.1865	.1855	.1845	.1835	.1825	.1815	.1806	.1796
160.0	.1786	.1777	.1767	.1758	.1748	.1739	.1730	.1720	.1711	.1702
165.0	.1693	.1684	.1675	.1666	.1657	.1648	.1639	.1630	.1621	.1613
170.0	.1604	.1595	.1587	.1578	.1570	.1561	.1553	.1545	.1536	.1528
175.0	.1520	.1512	.1504	.1496	.1488	.1480	.1472	.1464	.1456	.1448
180.0	.1440	.1433	.1425	.1417	.1410	.1402	.1395	.1387	.1380	.1372
185.0	.1365	.1358	.1350	.1343	.1336	.1329	.1321	.1314	.1307	.1300
190.0	.1293	.1286	.1279	.1273	.1266	.1259	.1252	.1245	.1239	.1232
195.0	.1226	.1219	.1212	.1206	.1199	.1193	.1187	.1180	.1174	.1168
200.0	.1161	.1155	.1149	.1143	.1137	.1130	.1124	.1118	.1112	.1106
205.0	.1100	.1095	.1089	.1083	.1077	.1071	.1065	.1060	.1054	.1048
210.0	.1043	.1037	.1032	.1026	.1021	.1015	.1010	.1004	.0999	.0993

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HALF-LIFE 59.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
0.00	1.0000	.9970	.9941	.9912	.9883	.9854	.9825	.9796	.9767	.9739	.9710	.9682
3.00	.9653	.9625	.9597	.9569	.9540	.9512	.9485	.9457	.9429	.9401	.9374	.9346
6.00	.9319	.9292	.9264	.9237	.9210	.9183	.9156	.9129	.9102	.9076	.9049	.9023
9.00	.8996	.8970	.8943	.8917	.8891	.8865	.8839	.8813	.8787	.8761	.8736	.8710
12.00	.8685	.8659	.8634	.8608	.8583	.8558	.8533	.8508	.8483	.8458	.8433	.8408
15.00	.8384	.8359	.8335	.8310	.8286	.8262	.8237	.8213	.8189	.8165	.8141	.8117
18.00	.8093	.8070	.8046	.8022	.7999	.7975	.7952	.7929	.7905	.7882	.7859	.7836
21.00	.7813	.7790	.7767	.7745	.7722	.7699	.7677	.7654	.7632	.7609	.7587	.7565
24.00	.7543	.7520	.7498	.7476	.7454	.7433	.7411	.7389	.7367	.7346	.7324	.7303
27.00	.7281	.7260	.7239	.7217	.7196	.7175	.7154	.7133	.7112	.7091	.7071	.7050
30.00	.7029	.7009	.6988	.6967	.6947	.6927	.6906	.6886	.6866	.6846	.6826	.6806
33.00	.6786	.6766	.6746	.6726	.6706	.6687	.6567	.6648	.6628	.6609	.6589	.6570
36.00	.6551	.6531	.6512	.6493	.6474	.6455	.6436	.6417	.6399	.6380	.6361	.6342
39.00	.6324	.6305	.6287	.6268	.6250	.6232	.6213	.6195	.6177	.6159	.6141	.6123
42.00	.6105	.6087	.6069	.6051	.6033	.6016	.5998	.5981	.5963	.5946	.5928	.5911
45.00	.5893	.5876	.5859	.5842	.5825	.5807	.5790	.5773	.5757	.5740	.5723	.5706
48.00	.5689	.5673	.5656	.5639	.5623	.5606	.5590	.5573	.5557	.5541	.5525	.5508
51.00	.5492	.5476	.5460	.5444	.5428	.5412	.5396	.5380	.5365	.5349	.5333	.5318
54.00	.5302	.5286	.5271	.5255	.5240	.5225	.5209	.5194	.5179	.5164	.5149	.5133
57.00	.5118	.5103	.5088	.5073	.5059	.5044	.5029	.5014	.5000	.4985	.4970	.4956
60.00	.4941	.4927	.4912	.4898	.4883	.4869	.4855	.4841	.4826	.4812	.4798	.4784
63.00	.4770	.4756	.4742	.4728	.4714	.4700	.4687	.4673	.4659	.4646	.4632	.4618
66.00	.4605	.4591	.4578	.4564	.4551	.4538	.4524	.4511	.4498	.4485	.4471	.4458
69.00	.4445	.4432	.4419	.4406	.4393	.4380	.4368	.4355	.4342	.4329	.4317	.4304
72.00	.4291	.4279	.4266	.4254	.4241	.4229	.4216	.4204	.4192	.4179	.4167	.4155
75.00	.4143	.4131	.4118	.4106	.4094	.4082	.4070	.4058	.4046	.4035	.4023	.4011
78.00	.3999	.3987	.3976	.3964	.3952	.3941	.3929	.3918	.3906	.3895	.3883	.3872
81.00	.3861	.3849	.3838	.3827	.3816	.3804	.3793	.3782	.3771	.3760	.3749	.3738
84.00	.3727	.3716	.3705	.3694	.3683	.3673	.3662	.3651	.3640	.3630	.3619	.3608
87.00	.3598	.3587	.3577	.3566	.3556	.3545	.3535	.3525	.3514	.3504	.3494	.3483
90.00	.3473	.3463	.3453	.3443	.3433	.3423	.3413	.3403	.3393	.3383	.3373	.3363
93.00	.3353	.3343	.3333	.3324	.3314	.3304	.3294	.3285	.3275	.3265	.3256	.3246
96.00	.3237	.3227	.3218	.3208	.3199	.3190	.3180	.3171	.3162	.3152	.3143	.3134
99.00	.3125	.3116	.3106	.3097	.3088	.3079	.3070	.3061	.3052	.3043	.3034	.3025
102.00	.3016	.3008	.2999	.2990	.2981	.2973	.2964	.2955	.2946	.2938	.2929	.2921
105.00	.2912	.2903	.2895	.2886	.2878	.2870	.2861	.2853	.2844	.2836	.2828	.2819
108.00	.2811	.2803	.2795	.2786	.2778	.2770	.2762	.2754	.2746	.2738	.2730	.2722
111.00	.2714	.2706	.2698	.2690	.2682	.2674	.2666	.2659	.2651	.2643	.2635	.2627
114.00	.2620	.2612	.2604	.2597	.2589	.2582	.2574	.2566	.2559	.2551	.2544	.2536
117.00	.2529	.2522	.2514	.2507	.2500	.2492	.2485	.2478	.2470	.2463	.2456	.2449

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HALF-LIFE 59.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
120.00	.2441	.2434	.2427	.2420	.2413	.2406	.2399	.2392	.2385	.2378	.2371	.2364
123.00	.2357	.2350	.2343	.2336	.2329	.2323	.2316	.2309	.2302	.2295	.2289	.2282
126.00	.2275	.2269	.2262	.2255	.2249	.2242	.2235	.2229	.2222	.2216	.2209	.2203
129.00	.2196	.2190	.2184	.2177	.2171	.2164	.2158	.2152	.2145	.2139	.2133	.2127
132.00	.2120	.2114	.2108	.2102	.2096	.2089	.2083	.2077	.2071	.2065	.2059	.2053
135.00	.2047	.2041	.2035	.2029	.2023	.2017	.2011	.2005	.1999	.1993	.1988	.1982
138.00	.1976	.1970	.1964	.1959	.1953	.1947	.1941	.1936	.1930	.1924	.1919	.1913
141.00	.1908	.1902	.1896	.1891	.1885	.1880	.1874	.1869	.1863	.1858	.1852	.1847
144.00	.1841	.1836	.1831	.1825	.1820	.1815	.1809	.1804	.1799	.1793	.1788	.1783
147.00	.1778	.1772	.1767	.1762	.1757	.1752	.1747	.1741	.1736	.1731	.1726	.1721
150.00	.1716	.1711	.1706	.1701	.1696	.1691	.1686	.1681	.1676	.1671	.1666	.1662
153.00	.1657	.1652	.1647	.1642	.1637	.1632	.1628	.1623	.1618	.1613	.1609	.1604
156.00	.1599	.1595	.1590	.1585	.1581	.1576	.1571	.1567	.1562	.1558	.1553	.1548
159.00	.1544	.1539	.1535	.1530	.1526	.1521	.1517	.1512	.1508	.1504	.1499	.1495
162.00	.1490	.1486	.1482	.1477	.1473	.1469	.1464	.1460	.1456	.1451	.1447	.1443
165.00	.1439	.1435	.1430	.1426	.1422	.1418	.1414	.1409	.1405	.1401	.1397	.1393
168.00	.1389	.1385	.1381	.1377	.1373	.1369	.1365	.1361	.1357	.1353	.1349	.1345
171.00	.1341	.1337	.1333	.1329	.1325	.1321	.1317	.1313	.1310	.1306	.1302	.1298
174.00	.1294	.1291	.1287	.1283	.1279	.1275	.1272	.1268	.1264	.1261	.1257	.1253
177.00	.1250	.1246	.1242	.1239	.1235	.1231	.1228	.1224	.1220	.1217	.1213	.1210
180.00	.1206	.1203	.1199	.1196	.1192	.1189	.1185	.1182	.1178	.1175	.1171	.1168
183.00	.1164	.1161	.1158	.1154	.1151	.1147	.1144	.1141	.1137	.1134	.1131	.1127
186.00	.1124	.1121	.1117	.1114	.1111	.1108	.1104	.1101	.1098	.1095	.1092	.1088
189.00	.1085	.1082	.1079	.1076	.1072	.1069	.1066	.1063	.1060	.1057	.1054	.1051
192.00	.1048	.1044	.1041	.1038	.1035	.1032	.1029	.1026	.1023	.1020	.1017	.1014
195.00	.1011	.1008	.1005	.1002	.0999	.0996	.0994	.0991	.0988	.0985	.0982	.0979

ZN - 65

HALF-LIFE 245.00 DAYS CALCULATION INTERVAL 2.0 DAYS

DAYS	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0
0.0	1.0000	.9943	.9887	.9831	.9776	.9721	.9666	.9611	.9557	.9503
20.0	.9449	.9396	.9343	.9290	.9238	.9186	.9134	.9082	.9031	.8980
40.0	.8930	.8879	.8829	.8779	.8730	.8680	.8631	.8583	.8534	.8486
60.0	.8438	.8391	.8343	.8296	.8249	.8203	.8157	.8111	.8065	.8019
80.0	.7974	.7929	.7884	.7840	.7796	.7752	.7708	.7664	.7621	.7578
100.0	.7535	.7493	.7451	.7408	.7367	.7325	.7284	.7243	.7202	.7161
120.0	.7121	.7081	.7041	.7001	.6961	.6922	.6883	.6844	.6806	.6767
140.0	.6729	.6691	.6653	.6616	.6578	.6541	.6504	.6468	.6431	.6395
160.0	.6359	.6323	.6287	.6252	.6216	.6181	.6147	.6112	.6077	.6043
180.0	.6009	.5975	.5941	.5908	.5874	.5841	.5808	.5776	.5743	.5711
200.0	.5678	.5646	.5614	.5583	.5551	.5520	.5489	.5458	.5427	.5396
220.0	.5366	.5336	.5306	.5276	.5246	.5216	.5187	.5158	.5128	.5100
240.0	.5071	.5042	.5014	.4985	.4957	.4929	.4901	.4874	.4846	.4819
260.0	.4792	.4765	.4738	.4711	.4685	.4658	.4632	.4606	.4580	.4554
280.0	.4528	.4503	.4477	.4452	.4427	.4402	.4377	.4352	.4328	.4303
300.0	.4279	.4255	.4231	.4207	.4184	.4160	.4136	.4113	.4090	.4067
320.0	.4044	.4021	.3998	.3975	.3953	.3931	.3909	.3887	.3865	.3843
340.0	.3821	.3800	.3778	.3757	.3736	.3714	.3694	.3673	.3652	.3631
360.0	.3611	.3590	.3570	.3550	.3530	.3510	.3490	.3471	.3451	.3432
380.0	.3412	.3393	.3374	.3355	.3336	.3317	.3298	.3280	.3261	.3243
400.0	.3224	.3206	.3188	.3170	.3152	.3134	.3117	.3099	.3082	.3064
420.0	.3047	.3030	.3013	.2996	.2979	.2962	.2945	.2929	.2912	.2896
440.0	.2879	.2863	.2847	.2831	.2815	.2799	.2783	.2768	.2752	.2736
460.0	.2721	.2706	.2690	.2675	.2660	.2645	.2630	.2615	.2601	.2586
480.0	.2571	.2557	.2542	.2528	.2514	.2500	.2485	.2471	.2457	.2444
500.0	.2430	.2416	.2402	.2389	.2375	.2362	.2349	.2335	.2322	.2309
520.0	.2296	.2283	.2270	.2257	.2245	.2232	.2219	.2207	.2194	.2182
540.0	.2170	.2157	.2145	.2133	.2121	.2109	.2097	.2085	.2074	.2062
560.0	.2050	.2039	.2027	.2016	.2004	.1993	.1982	.1971	.1960	.1949
580.0	.1938	.1927	.1916	.1905	.1894	.1883	.1873	.1862	.1852	.1841
600.0	.1831	.1821	.1810	.1800	.1790	.1780	.1770	.1760	.1750	.1740
620.0	.1730	.1720	.1711	.1701	.1691	.1682	.1672	.1663	.1654	.1644
640.0	.1635	.1626	.1617	.1607	.1598	.1589	.1580	.1571	.1563	.1554
660.0	.1545	.1536	.1528	.1519	.1510	.1502	.1493	.1485	.1477	.1468
680.0	.1460	.1452	.1444	.1435	.1427	.1419	.1411	.1403	.1395	.1387
700.0	.1380	.1372	.1364	.1356	.1349	.1341	.1334	.1326	.1319	.1311
720.0	.1304	.1296	.1289	.1282	.1275	.1267	.1260	.1253	.1246	.1239
740.0	.1232	.1225	.1218	.1211	.1204	.1198	.1191	.1184	.1177	.1171
760.0	.1164	.1158	.1151	.1145	.1138	.1132	.1125	.1119	.1113	.1106
780.0	.1100	.1094	.1088	.1082	.1075	.1069	.1063	.1057	.1051	.1045
800.0	.1040	.1034	.1028	.1022	.1016	.1011	.1005	.0999	.0993	.0988

ZR - 95

HALF-LIFE 65.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
0.00	1.0000	.9973	.9946	.9920	.9893	.9867	.9841	.9815	.9788	.9762	.9736	.9711
3.00	.9685	.9659	.9633	.9607	.9582	.9556	.9531	.9506	.9480	.9455	.9430	.9405
6.00	.9380	.9355	.9330	.9305	.9280	.9256	.9231	.9206	.9182	.9157	.9133	.9109
9.00	.9084	.9060	.9036	.9012	.8988	.8964	.8940	.8916	.8893	.8869	.8845	.8822
12.00	.8798	.8775	.8752	.8728	.8705	.8682	.8659	.8636	.8613	.8590	.8567	.8544
15.00	.8521	.8499	.8476	.8453	.8431	.8408	.8386	.8364	.8341	.8319	.8297	.8275
18.00	.8253	.8231	.8209	.8187	.8165	.8144	.8122	.8100	.8079	.8057	.8036	.8014
21.00	.7993	.7972	.7951	.7929	.7908	.7887	.7866	.7845	.7824	.7804	.7783	.7762
24.00	.7741	.7721	.7700	.7680	.7659	.7639	.7619	.7598	.7578	.7558	.7538	.7518
27.00	.7498	.7478	.7458	.7438	.7418	.7398	.7379	.7359	.7339	.7320	.7300	.7281
30.00	.7262	.7242	.7223	.7204	.7185	.7165	.7146	.7127	.7108	.7089	.7071	.7052
33.00	.7033	.7014	.6996	.6977	.6958	.6940	.6921	.6903	.6885	.6866	.6848	.6830
36.00	.6812	.6793	.6775	.6757	.6739	.6721	.6703	.6686	.6668	.6650	.6632	.6615
39.00	.6597	.6579	.6562	.6544	.6527	.6510	.6492	.6475	.6458	.6441	.6423	.6406
42.00	.6389	.6372	.6355	.6338	.6322	.6305	.6288	.6271	.6254	.6238	.6221	.6205
45.00	.6188	.6172	.6155	.6139	.6122	.6106	.6090	.6074	.6058	.6041	.6025	.6009
48.00	.5993	.5977	.5961	.5946	.5930	.5914	.5898	.5882	.5867	.5851	.5836	.5820
51.00	.5805	.5789	.5774	.5758	.5743	.5728	.5712	.5697	.5682	.5667	.5652	.5637
54.00	.5622	.5607	.5592	.5577	.5562	.5547	.5533	.5518	.5503	.5489	.5474	.5459
57.00	.5445	.5430	.5416	.5401	.5387	.5373	.5358	.5344	.5330	.5316	.5302	.5287
60.00	.5273	.5259	.5245	.5231	.5217	.5203	.5190	.5176	.5162	.5148	.5135	.5121
63.00	.5107	.5094	.5080	.5067	.5053	.5040	.5026	.5013	.5000	.4986	.4973	.4960
66.00	.4946	.4933	.4920	.4907	.4894	.4881	.4868	.4855	.4842	.4829	.4816	.4803
69.00	.4791	.4778	.4765	.4753	.4740	.4727	.4715	.4702	.4690	.4677	.4665	.4652
72.00	.4640	.4628	.4615	.4603	.4591	.4578	.4566	.4554	.4542	.4530	.4518	.4506
75.00	.4494	.4482	.4470	.4458	.4446	.4434	.4422	.4411	.4399	.4387	.4376	.4364
78.00	.4352	.4341	.4329	.4318	.4306	.4295	.4283	.4272	.4260	.4249	.4238	.4226
81.00	.4215	.4204	.4193	.4182	.4170	.4159	.4148	.4137	.4126	.4115	.4104	.4093
84.00	.4082	.4072	.4061	.4050	.4039	.4028	.4018	.4007	.3996	.3986	.3975	.3964
87.00	.3954	.3943	.3933	.3922	.3912	.3902	.3891	.3881	.3870	.3860	.3850	.3840
90.00	.3829	.3819	.3809	.3799	.3789	.3779	.3769	.3759	.3749	.3739	.3729	.3719
93.00	.3709	.3699	.3689	.3679	.3669	.3660	.3650	.3640	.3631	.3621	.3611	.3602
96.00	.3592	.3582	.3573	.3563	.3554	.3544	.3535	.3526	.3516	.3507	.3498	.3488
99.00	.3479	.3470	.3460	.3451	.3442	.3433	.3424	.3415	.3406	.3396	.3387	.3378
102.00	.3369	.3360	.3351	.3343	.3334	.3325	.3316	.3307	.3298	.3289	.3281	.3272
105.00	.3263	.3255	.3246	.3237	.3229	.3220	.3211	.3203	.3194	.3186	.3177	.3169
108.00	.3161	.3152	.3144	.3135	.3127	.3119	.3110	.3102	.3094	.3086	.3077	.3069
111.00	.3061	.3053	.3045	.3037	.3029	.3020	.3012	.3004	.2996	.2988	.2980	.2973
114.00	.2965	.2957	.2949	.2941	.2933	.2925	.2918	.2910	.2902	.2894	.2887	.2879
117.00	.2871	.2864	.2856	.2848	.2841	.2833	.2826	.2818	.2811	.2803	.2796	.2788

ZR - 95

HALF-LIFE 65.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
120.00	.2781	.2773	.2766	.2759	.2751	.2744	.2737	.2729	.2722	.2715	.2708	.2700
123.00	.2693	.2686	.2679	.2672	.2665	.2658	.2651	.2643	.2636	.2629	.2622	.2615
126.00	.2608	.2601	.2595	.2588	.2581	.2574	.2567	.2560	.2553	.2547	.2540	.2533
129.00	.2526	.2520	.2513	.2506	.2500	.2493	.2486	.2480	.2473	.2466	.2460	.2453
132.00	.2447	.2440	.2434	.2427	.2421	.2414	.2408	.2401	.2395	.2389	.2382	.2376
135.00	.2370	.2363	.2357	.2351	.2345	.2338	.2332	.2326	.2320	.2314	.2307	.2301
138.00	.2295	.2289	.2283	.2277	.2271	.2265	.2259	.2253	.2247	.2241	.2235	.2229
141.00	.2223	.2217	.2211	.2205	.2199	.2193	.2188	.2182	.2176	.2170	.2164	.2159
144.00	.2153	.2147	.2141	.2136	.2130	.2124	.2119	.2113	.2107	.2102	.2096	.2091
147.00	.2085	.2079	.2074	.2068	.2063	.2057	.2052	.2046	.2041	.2036	.2030	.2025
150.00	.2019	.2014	.2009	.2003	.1998	.1993	.1987	.1982	.1977	.1971	.1966	.1961
153.00	.1956	.1951	.1945	.1940	.1935	.1930	.1925	.1920	.1914	.1909	.1904	.1899
156.00	.1894	.1889	.1884	.1879	.1874	.1869	.1864	.1859	.1854	.1849	.1844	.1839
159.00	.1834	.1830	.1825	.1820	.1815	.1810	.1805	.1801	.1796	.1791	.1786	.1781
162.00	.1777	.1772	.1767	.1763	.1758	.1753	.1749	.1744	.1739	.1735	.1730	.1725
165.00	.1721	.1716	.1712	.1707	.1703	.1698	.1693	.1689	.1684	.1680	.1675	.1671
168.00	.1667	.1662	.1658	.1653	.1649	.1644	.1640	.1636	.1631	.1627	.1623	.1618
171.00	.1614	.1610	.1605	.1601	.1597	.1593	.1588	.1584	.1580	.1576	.1572	.1567
174.00	.1563	.1559	.1555	.1551	.1547	.1543	.1538	.1534	.1530	.1526	.1522	.1518
177.00	.1514	.1510	.1506	.1502	.1498	.1494	.1490	.1486	.1482	.1478	.1474	.1470
180.00	.1466	.1462	.1459	.1455	.1451	.1447	.1443	.1439	.1435	.1432	.1428	.1424
183.00	.1420	.1416	.1413	.1409	.1405	.1401	.1398	.1394	.1390	.1386	.1383	.1379
186.00	.1375	.1372	.1368	.1364	.1361	.1357	.1354	.1350	.1346	.1343	.1339	.1336
189.00	.1332	.1329	.1325	.1321	.1318	.1314	.1311	.1307	.1304	.1300	.1297	.1294
192.00	.1290	.1287	.1283	.1280	.1276	.1273	.1270	.1266	.1263	.1260	.1256	.1253
195.00	.1250	.1246	.1243	.1240	.1236	.1233	.1230	.1226	.1223	.1220	.1217	.1213
198.00	.1210	.1207	.1204	.1200	.1197	.1194	.1191	.1188	.1185	.1181	.1178	.1175
201.00	.1172	.1169	.1166	.1163	.1160	.1157	.1153	.1150	.1147	.1144	.1141	.1138
204.00	.1135	.1132	.1129	.1126	.1123	.1120	.1117	.1114	.1111	.1108	.1105	.1102
207.00	.1099	.1096	.1094	.1091	.1088	.1085	.1082	.1079	.1076	.1073	.1070	.1068
210.00	.1065	.1062	.1059	.1056	.1053	.1051	.1048	.1045	.1042	.1039	.1037	.1034
213.00	.1031	.1028	.1026	.1023	.1020	.1018	.1015	.1012	.1009	.1007	.1004	.1001
216.00	.0999	.0996	.0993	.0991	.0988	.0985	.0983	.0980	.0978	.0975	.0972	.0970
219.00	.0967	.0965	.0962	.0960	.0957	.0954	.0952	.0949	.0947	.0944	.0942	.0939
222.00	.0937	.0934	.0932	.0929	.0927	.0924	.0922	.0919	.0917	.0915	.0912	.0910
225.00	.0907	.0905	.0902	.0900	.0898	.0895	.0893	.0890	.0888	.0886	.0883	.0881
228.00	.0879	.0876	.0874	.0872	.0869	.0867	.0865	.0862	.0860	.0858	.0856	.0853
231.00	.0851	.0849	.0846	.0844	.0842	.0840	.0837	.0835	.0833	.0831	.0829	.0826
234.00	.0824	.0822	.0820	.0818	.0815	.0813	.0811	.0809	.0807	.0805	.0802	.0800
237.00	.0798	.0796	.0794	.0792	.0790	.0788	.0786	.0783	.0781	.0779	.0777	.0775

ZR - 95

HALF-LIFE 65.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
240.00	.0773	.0771	.0769	.0767	.0765	.0763	.0761	.0759	.0757	.0755	.0753	.0751
243.00	.0749	.0747	.0745	.0743	.0741	.0739	.0737	.0735	.0733	.0731	.0729	.0727
246.00	.0725	.0723	.0721	.0719	.0717	.0716	.0714	.0712	.0710	.0708	.0706	.0704
249.00	.0702	.0700	.0699	.0697	.0695	.0693	.0691	.0689	.0687	.0686	.0684	.0682
252.00	.0680	.0678	.0677	.0675	.0673	.0671	.0669	.0668	.0666	.0664	.0662	.0660
255.00	.0659	.0657	.0655	.0653	.0652	.0650	.0648	.0647	.0645	.0643	.0641	.0640
258.00	.0638	.0636	.0635	.0633	.0631	.0630	.0628	.0626	.0625	.0623	.0621	.0620
261.00	.0618	.0616	.0615	.0613	.0611	.0610	.0608	.0606	.0605	.0603	.0602	.0600
264.00	.0598	.0597	.0595	.0594	.0592	.0590	.0589	.0587	.0586	.0584	.0583	.0581
267.00	.0580	.0578	.0576	.0575	.0573	.0572	.0570	.0569	.0567	.0566	.0564	.0563
270.00	.0561	.0560	.0558	.0557	.0555	.0554	.0552	.0551	.0549	.0548	.0547	.0545
273.00	.0544	.0542	.0541	.0539	.0538	.0536	.0535	.0534	.0532	.0531	.0529	.0528
276.00	.0526	.0525	.0524	.0522	.0521	.0519	.0518	.0517	.0515	.0514	.0513	.0511
279.00	.0510	.0509	.0507	.0506	.0504	.0503	.0502	.0500	.0499	.0498	.0496	.0495
282.00	.0494	.0492	.0491	.0490	.0489	.0487	.0486	.0485	.0483	.0482	.0481	.0480
285.00	.0478	.0477	.0476	.0474	.0473	.0472	.0471	.0469	.0468	.0467	.0466	.0464
288.00	.0463	.0462	.0461	.0459	.0458	.0457	.0456	.0455	.0453	.0452	.0451	.0450
291.00	.0449	.0447	.0446	.0445	.0444	.0443	.0441	.0440	.0439	.0438	.0437	.0436
294.00	.0434	.0433	.0432	.0431	.0430	.0429	.0428	.0426	.0425	.0424	.0423	.0422
297.00	.0421	.0420	.0418	.0417	.0416	.0415	.0414	.0413	.0412	.0411	.0410	.0409
300.00	.0407	.0406	.0405	.0404	.0403	.0402	.0401	.0400	.0399	.0398	.0397	.0396
303.00	.0395	.0394	.0393	.0391	.0390	.0389	.0388	.0387	.0386	.0385	.0384	.0383
306.00	.0382	.0381	.0380	.0379	.0378	.0377	.0376	.0375	.0374	.0373	.0372	.0371
309.00	.0370	.0369	.0368	.0367	.0366	.0365	.0364	.0363	.0362	.0361	.0360	.0359
312.00	.0358	.0358	.0357	.0356	.0355	.0354	.0353	.0352	.0351	.0350	.0349	.0348
315.00	.0347	.0346	.0345	.0344	.0343	.0343	.0342	.0341	.0340	.0339	.0338	.0337
318.00	.0336	.0335	.0334	.0334	.0333	.0332	.0331	.0330	.0329	.0328	.0327	.0326
321.00	.0326	.0325	.0324	.0323	.0322	.0321	.0320	.0320	.0319	.0318	.0317	.0316
324.00	.0315	.0315	.0314	.0313	.0312	.0311	.0310	.0310	.0309	.0308	.0307	.0306
327.00	.0305	.0305	.0304	.0303	.0302	.0301	.0301	.0300	.0299	.0298	.0297	.0297
330.00	.0296	.0295	.0294	.0293	.0293	.0292	.0291	.0290	.0290	.0289	.0288	.0287
333.00	.0286	.0286	.0285	.0284	.0283	.0283	.0282	.0281	.0280	.0280	.0279	.0278
336.00	.0277	.0277	.0276	.0275	.0274	.0274	.0273	.0272	.0272	.0271	.0270	.0269
339.00	.0269	.0268	.0267	.0267	.0266	.0265	.0264	.0264	.0263	.0262	.0262	.0261
342.00	.0260	.0259	.0259	.0258	.0257	.0257	.0256	.0255	.0255	.0254	.0253	.0253
345.00	.0252	.0251	.0251	.0250	.0249	.0249	.0248	.0247	.0247	.0246	.0245	.0245
348.00	.0244	.0243	.0243	.0242	.0241	.0241	.0240	.0240	.0239	.0238	.0238	.0237
351.00	.0236	.0236	.0235	.0234	.0234	.0233	.0233	.0232	.0231	.0231	.0230	.0229
354.00	.0229	.0228	.0228	.0227	.0226	.0226	.0225	.0225	.0224	.0223	.0223	.0222
357.00	.0222	.0221	.0220	.0220	.0219	.0219	.0218	.0218	.0217	.0216	.0216	.0215

ZR - 95

HALF-LIFE 65.00 DAYS CALCULATION INTERVAL 6.0 HOURS

DAYS	HOURS 0.0	6.0	12.0	18.0	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0
360.00	.0215	.0214	.0214	.0213	.0212	.0212	.0211	.0211	.0210	.0210	.0209	.0208
363.00	.0208	.0207	.0207	.0206	.0206	.0205	.0205	.0204	.0203	.0203	.0202	.0202
366.00	.0201	.0201	.0200	.0200	.0199	.0199	.0198	.0198	.0197	.0197	.0196	.0195
369.00	.0195	.0194	.0194	.0193	.0193	.0192	.0192	.0191	.0191	.0190	.0190	.0189
372.00	.0189	.0188	.0188	.0187	.0187	.0186	.0186	.0185	.0185	.0184	.0184	.0183
375.00	.0183	.0182	.0182	.0181	.0181	.0180	.0180	.0179	.0179	.0179	.0178	.0178
378.00	.0177	.0177	.0176	.0176	.0175	.0175	.0174	.0174	.0173	.0173	.0172	.0172
381.00	.0171	.0171	.0171	.0170	.0170	.0169	.0169	.0168	.0168	.0167	.0167	.0167
384.00	.0166	.0166	.0165	.0165	.0164	.0164	.0163	.0163	.0163	.0162	.0162	.0161
387.00	.0161	.0160	.0160	.0160	.0159	.0159	.0158	.0158	.0157	.0157	.0157	.0156
390.00	.0156	.0155	.0155	.0155	.0154	.0154	.0153	.0153	.0152	.0152	.0152	.0151
393.00	.0151	.0150	.0150	.0150	.0149	.0149	.0148	.0148	.0148	.0147	.0147	.0146
396.00	.0146	.0146	.0145	.0145	.0145	.0144	.0144	.0143	.0143	.0143	.0142	.0142
399.00	.0141	.0141	.0141	.0140	.0140	.0140	.0139	.0139	.0138	.0138	.0138	.0137
402.00	.0137	.0137	.0136	.0136	.0136	.0135	.0135	.0134	.0134	.0134	.0133	.0133
405.00	.0133	.0132	.0132	.0132	.0131	.0131	.0131	.0130	.0130	.0129	.0129	.0129
408.00	.0128	.0128	.0128	.0127	.0127	.0127	.0126	.0126	.0126	.0125	.0125	.0125
411.00	.0124	.0124	.0124	.0123	.0123	.0123	.0122	.0122	.0122	.0121	.0121	.0121
414.00	.0120	.0120	.0120	.0120	.0119	.0119	.0119	.0118	.0118	.0118	.0117	.0117
417.00	.0117	.0116	.0116	.0116	.0115	.0115	.0115	.0114	.0114	.0114	.0114	.0113
420.00	.0113	.0113	.0112	.0112	.0112	.0111	.0111	.0111	.0111	.0110	.0110	.0110
423.00	.0109	.0109	.0109	.0109	.0108	.0108	.0108	.0107	.0107	.0107	.0107	.0106
426.00	.0106	.0106	.0105	.0105	.0105	.0105	.0104	.0104	.0104	.0103	.0103	.0103
429.00	.0103	.0102	.0102	.0102	.0101	.0101	.0101	.0101	.0100	.0100	.0100	.0100
432.00	.0099	.0099	.0099	.0099	.0098	.0098	.0098	.0097	.0097	.0097	.0097	.0096

FRACTIONAL INGROWTH OF RN-222 INTO RA-226

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
0.0	0.0000	.0075	.0150	.0224	.0297	.0370	.0443	.0515	.0586	.0657	.0728	.0798
.5	.0867	.0936	.1004	.1072	.1139	.1206	.1272	.1338	.1403	.1468	.1532	.1596
1.0	.1659	.1722	.1784	.1846	.1907	.1968	.2029	.2089	.2148	.2208	.2266	.2325
1.5	.2382	.2440	.2497	.2553	.2609	.2665	.2720	.2775	.2829	.2883	.2937	.2990
2.0	.3043	.3095	.3147	.3199	.3250	.3301	.3351	.3402	.3451	.3501	.3550	.3598
2.5	.3646	.3694	.3742	.3789	.3836	.3882	.3928	.3974	.4019	.4064	.4109	.4153
3.0	.4197	.4241	.4284	.4327	.4370	.4413	.4455	.4496	.4538	.4579	.4620	.4660
3.5	.4701	.4740	.4780	.4819	.4858	.4897	.4936	.4974	.5012	.5049	.5086	.5123
4.0	.5160	.5197	.5233	.5269	.5304	.5340	.5375	.5410	.5444	.5478	.5513	.5546
4.5	.5580	.5613	.5646	.5679	.5712	.5744	.5776	.5808	.5839	.5871	.5902	.5933
5.0	.5963	.5994	.6024	.6054	.6083	.6113	.6142	.6171	.6200	.6229	.6257	.6285
5.5	.6313	.6341	.6369	.6396	.6423	.6450	.6477	.6503	.6530	.6556	.6582	.6607
6.0	.6633	.6658	.6683	.6708	.6733	.6758	.6782	.6807	.6831	.6854	.6878	.6902
6.5	.6925	.6948	.6971	.6994	.7017	.7039	.7061	.7083	.7105	.7127	.7149	.7170
7.0	.7192	.7213	.7234	.7255	.7275	.7296	.7316	.7336	.7356	.7376	.7396	.7416
7.5	.7435	.7454	.7474	.7493	.7512	.7530	.7549	.7567	.7586	.7604	.7622	.7640
8.0	.7658	.7675	.7693	.7710	.7727	.7744	.7761	.7778	.7795	.7812	.7828	.7844
8.5	.7861	.7877	.7893	.7909	.7924	.7940	.7956	.7971	.7986	.8001	.8016	.8031
9.0	.8046	.8061	.8075	.8090	.8104	.8119	.8133	.8147	.8161	.8175	.8188	.8202
9.5	.8216	.8229	.8242	.8256	.8269	.8282	.8295	.8308	.8320	.8333	.8345	.8358
10.0	.8370	.8383	.8395	.8407	.8419	.8431	.8443	.8454	.8466	.8477	.8489	.8500
10.5	.8512	.8523	.8534	.8545	.8556	.8567	.8578	.8588	.8599	.8609	.8620	.8630
11.0	.8641	.8651	.8661	.8671	.8681	.8691	.8701	.8711	.8720	.8730	.8740	.8749
11.5	.8759	.8768	.8777	.8786	.8795	.8804	.8813	.8822	.8831	.8840	.8849	.8857
12.0	.8866	.8875	.8883	.8892	.8900	.8908	.8916	.8925	.8933	.8941	.8949	.8957
12.5	.8964	.8972	.8980	.8988	.8995	.9003	.9010	.9018	.9025	.9032	.9040	.9047
13.0	.9054	.9061	.9068	.9075	.9082	.9089	.9096	.9103	.9110	.9116	.9123	.9130
13.5	.9136	.9143	.9149	.9155	.9162	.9168	.9174	.9181	.9187	.9193	.9199	.9205
14.0	.9211	.9217	.9223	.9229	.9234	.9240	.9246	.9252	.9257	.9263	.9268	.9274
14.5	.9279	.9285	.9290	.9296	.9301	.9306	.9311	.9316	.9322	.9327	.9332	.9337
15.0	.9342	.9347	.9352	.9357	.9361	.9366	.9371	.9376	.9380	.9385	.9390	.9394
15.5	.9399	.9403	.9408	.9412	.9417	.9421	.9425	.9430	.9434	.9438	.9443	.9447
16.0	.9451	.9455	.9459	.9463	.9467	.9471	.9475	.9479	.9483	.9487	.9491	.9495
16.5	.9498	.9502	.9506	.9510	.9513	.9517	.9521	.9524	.9528	.9531	.9535	.9538
17.0	.9542	.9545	.9549	.9552	.9556	.9559	.9562	.9565	.9569	.9572	.9575	.9578
17.5	.9582	.9585	.9588	.9591	.9594	.9597	.9600	.9603	.9606	.9609	.9612	.9615
18.0	.9618	.9621	.9624	.9626	.9629	.9632	.9635	.9637	.9640	.9643	.9646	.9648
18.5	.9651	.9654	.9656	.9659	.9661	.9664	.9666	.9669	.9671	.9674	.9676	.9679
19.0	.9681	.9684	.9686	.9688	.9691	.9693	.9695	.9698	.9700	.9702	.9704	.9707
19.5	.9709	.9711	.9713	.9715	.9717	.9719	.9722	.9724	.9726	.9728	.9730	.9732

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FRACTIONAL INGROWTH OF RN-222 INTO PA-226

DAYS	HOURS 0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
20.0	.9734	.9736	.9738	.9740	.9742	.9744	.9746	.9748	.9749	.9751	.9753	.9755
20.5	.9757	.9759	.9761	.9762	.9764	.9766	.9768	.9769	.9771	.9773	.9775	.9776
21.0	.9778	.9780	.9781	.9783	.9785	.9786	.9788	.9789	.9791	.9793	.9794	.9796
21.5	.9797	.9799	.9800	.9802	.9803	.9805	.9806	.9808	.9809	.9810	.9812	.9813
22.0	.9815	.9816	.9817	.9819	.9820	.9822	.9823	.9824	.9826	.9827	.9828	.9829
22.5	.9831	.9832	.9833	.9834	.9836	.9837	.9838	.9839	.9841	.9842	.9843	.9844
23.0	.9845	.9846	.9848	.9849	.9850	.9851	.9852	.9853	.9854	.9855	.9857	.9858
23.5	.9859	.9860	.9861	.9862	.9863	.9864	.9865	.9866	.9867	.9868	.9869	.9870
24.0	.9871	.9872	.9873	.9874	.9875	.9876	.9877	.9877	.9878	.9879	.9880	.9881
24.5	.9882	.9883	.9884	.9885	.9885	.9886	.9887	.9888	.9889	.9890	.9891	.9891
25.0	.9892	.9893	.9894	.9895	.9895	.9896	.9897	.9898	.9898	.9899	.9900	.9901
25.5	.9901	.9902	.9903	.9904	.9904	.9905	.9906	.9906	.9907	.9908	.9909	.9909
26.0	.9910	.9911	.9911	.9912	.9913	.9913	.9914	.9915	.9915	.9916	.9916	.9917
26.5	.9918	.9918	.9919	.9919	.9920	.9921	.9921	.9922	.9922	.9923	.9924	.9924
27.0	.9925	.9925	.9926	.9926	.9927	.9927	.9928	.9929	.9929	.9930	.9930	.9931
27.5	.9931	.9932	.9932	.9933	.9933	.9934	.9934	.9935	.9935	.9936	.9936	.9937
28.0	.9937	.9938	.9938	.9938	.9939	.9939	.9940	.9940	.9941	.9941	.9942	.9942
28.5	.9942	.9943	.9943	.9944	.9944	.9945	.9945	.9945	.9946	.9946	.9947	.9947
29.0	.9947	.9948	.9948	.9949	.9949	.9949	.9950	.9950	.9950	.9951	.9951	.9952
29.5	.9952	.9952	.9953	.9953	.9953	.9954	.9954	.9954	.9955	.9955	.9955	.9956
30.0	.9956	.9956	.9957	.9957	.9957	.9958	.9958	.9958	.9959	.9959	.9959	.9959
30.5	.9960	.9960	.9960	.9961	.9961	.9961	.9961	.9962	.9962	.9962	.9963	.9963
31.0	.9963	.9963	.9964	.9964	.9964	.9964	.9965	.9965	.9965	.9966	.9966	.9966
31.5	.9966	.9967	.9967	.9967	.9967	.9967	.9968	.9968	.9968	.9968	.9969	.9969
32.0	.9969	.9969	.9970	.9970	.9970	.9970	.9970	.9971	.9971	.9971	.9971	.9972
32.5	.9972	.9972	.9972	.9972	.9973	.9973	.9973	.9973	.9973	.9974	.9974	.9974
33.0	.9974	.9974	.9974	.9975	.9975	.9975	.9975	.9975	.9976	.9976	.9976	.9976
33.5	.9976	.9976	.9977	.9977	.9977	.9977	.9977	.9977	.9978	.9978	.9978	.9978
34.0	.9978	.9978	.9979	.9979	.9979	.9979	.9979	.9979	.9979	.9980	.9980	.9980
34.5	.9980	.9980	.9980	.9980	.9981	.9981	.9981	.9981	.9981	.9981	.9981	.9982
35.0	.9982	.9982	.9982	.9982	.9982	.9982	.9982	.9983	.9983	.9983	.9983	.9983
35.5	.9983	.9983	.9983	.9984	.9984	.9984	.9984	.9984	.9984	.9984	.9984	.9984
36.0	.9985	.9985	.9985	.9985	.9985	.9985	.9985	.9985	.9985	.9986	.9986	.9986
36.5	.9986	.9986	.9986	.9986	.9986	.9986	.9986	.9987	.9987	.9987	.9987	.9987
37.0	.9987	.9987	.9987	.9987	.9987	.9987	.9988	.9988	.9988	.9988	.9988	.9988
37.5	.9988	.9988	.9988	.9988	.9988	.9988	.9989	.9989	.9989	.9989	.9989	.9989
38.0	.9989	.9989	.9989	.9989	.9989	.9989	.9989	.9990	.9990	.9990	.9990	.9990
38.5	.9990	.9990	.9990	.9990	.9990	.9990	.9990	.9990	.9990	.9990	.9991	.9991
39.0	.9991	.9991	.9991	.9991	.9991	.9991	.9991	.9991	.9991	.9991	.9991	.9991
39.5	.9991	.9991	.9992	.9992	.9992	.9992	.9992	.9992	.9992	.9992	.9992	.9992

FRACTIONAL INGROWTH OF Y-90 INTO SR-90

HOURS	HOURS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
	.0000	.0053	.0107	.0160	.0212	.0265	.0317	.0369	.0421	.0472
5	.0523	.0574	.0625	.0675	.0725	.0775	.0825	.0874	.0923	.0971
10	.1020	.1068	.1116	.1164	.1211	.1258	.1305	.1352	.1398	.1444
15	.1490	.1536	.1581	.1627	.1672	.1716	.1761	.1805	.1849	.1893
20	.1936	.1979	.2022	.2065	.2108	.2150	.2192	.2234	.2276	.2317
25	.2359	.2400	.2440	.2481	.2521	.2561	.2601	.2641	.2681	.2720
30	.2759	.2798	.2836	.2875	.2913	.2951	.2989	.3027	.3064	.3101
35	.3138	.3175	.3212	.3248	.3284	.3320	.3356	.3392	.3427	.3463
40	.3498	.3533	.3567	.3602	.3636	.3670	.3704	.3738	.3772	.3805
45	.3838	.3871	.3904	.3937	.3969	.4002	.4034	.4066	.4098	.4129
50	.4161	.4192	.4223	.4254	.4285	.4316	.4346	.4377	.4407	.4437
55	.4467	.4496	.4526	.4555	.4585	.4614	.4643	.4671	.4700	.4728
60	.4757	.4785	.4813	.4841	.4868	.4896	.4923	.4950	.4977	.5004
65	.5031	.5058	.5084	.5111	.5137	.5163	.5189	.5215	.5240	.5266
70	.5291	.5317	.5342	.5367	.5392	.5416	.5441	.5465	.5490	.5514
75	.5538	.5562	.5586	.5609	.5633	.5656	.5680	.5703	.5726	.5749
80	.5772	.5794	.5817	.5839	.5862	.5884	.5906	.5928	.5950	.5971
85	.5993	.6014	.6036	.6057	.6078	.6099	.6120	.6141	.6162	.6182
90	.6203	.6223	.6243	.6264	.6284	.6303	.6323	.6343	.6363	.6382
95	.6402	.6421	.6440	.6459	.6478	.6497	.6516	.6534	.6553	.6572
100	.6590	.6608	.6626	.6644	.6662	.6680	.6698	.6716	.6733	.6751
105	.6768	.6786	.6803	.6820	.6837	.6854	.6871	.6888	.6904	.6921
110	.6938	.6954	.6970	.6987	.7003	.7019	.7035	.7051	.7066	.7082
115	.7098	.7113	.7129	.7144	.7160	.7175	.7190	.7205	.7220	.7235
120	.7250	.7264	.7279	.7294	.7308	.7323	.7337	.7351	.7365	.7379
125	.7394	.7408	.7421	.7435	.7449	.7463	.7476	.7490	.7503	.7517
130	.7530	.7543	.7556	.7569	.7582	.7595	.7608	.7621	.7634	.7646
135	.7659	.7672	.7684	.7697	.7709	.7721	.7733	.7745	.7758	.7770
140	.7781	.7793	.7805	.7817	.7829	.7840	.7852	.7863	.7875	.7886
145	.7897	.7909	.7920	.7931	.7942	.7953	.7964	.7975	.7986	.7997
150	.8007	.8018	.8029	.8039	.8050	.8060	.8071	.8081	.8091	.8101
155	.8112	.8122	.8132	.8142	.8152	.8162	.8171	.8181	.8191	.8201
160	.8210	.8220	.8229	.8239	.8248	.8258	.8267	.8276	.8285	.8295
165	.8304	.8313	.8322	.8331	.8340	.8349	.8357	.8366	.8375	.8384
170	.8392	.8401	.8409	.8418	.8426	.8435	.8443	.8452	.8460	.8468
175	.8476	.8484	.8493	.8501	.8509	.8517	.8525	.8532	.8540	.8548
180	.8556	.8564	.8571	.8579	.8586	.8594	.8602	.8609	.8616	.8624
185	.8631	.8639	.8646	.8653	.8660	.8667	.8675	.8682	.8689	.8696
190	.8703	.8710	.8716	.8723	.8730	.8737	.8744	.8750	.8757	.8764
195	.8770	.8777	.8783	.8790	.8796	.8803	.8809	.8816	.8822	.8828

FRACTIONAL INGROWTH OF Y-90 INTO SR-90

HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
					HOURS					
200	.8834	.8841	.8847	.8853	.8859	.8865	.8871	.8877	.8883	.8889
205	.8895	.8901	.8907	.8913	.8919	.8924	.8930	.8936	.8941	.8947
210	.8953	.8958	.8964	.8969	.8975	.8980	.8986	.8991	.8997	.9002
215	.9007	.9013	.9018	.9023	.9028	.9033	.9039	.9044	.9049	.9054
220	.9059	.9064	.9069	.9074	.9079	.9084	.9089	.9093	.9098	.9103
225	.9108	.9113	.9117	.9122	.9127	.9131	.9136	.9141	.9145	.9150
230	.9154	.9159	.9163	.9168	.9172	.9176	.9181	.9185	.9190	.9194
235	.9198	.9202	.9207	.9211	.9215	.9219	.9223	.9228	.9232	.9236
240	.9240	.9244	.9248	.9252	.9256	.9260	.9264	.9268	.9272	.9275
245	.9279	.9283	.9287	.9291	.9294	.9298	.9302	.9306	.9309	.9313
250	.9317	.9320	.9324	.9327	.9331	.9335	.9338	.9342	.9345	.9349
255	.9352	.9355	.9359	.9362	.9366	.9369	.9372	.9376	.9379	.9382
260	.9386	.9389	.9392	.9395	.9398	.9402	.9405	.9408	.9411	.9414
265	.9417	.9420	.9423	.9427	.9430	.9433	.9436	.9439	.9442	.9445
270	.9447	.9450	.9453	.9456	.9459	.9462	.9465	.9468	.9470	.9473
275	.9476	.9479	.9481	.9484	.9487	.9490	.9492	.9495	.9498	.9500
280	.9503	.9506	.9508	.9511	.9513	.9516	.9519	.9521	.9524	.9526
285	.9529	.9531	.9534	.9536	.9538	.9541	.9543	.9546	.9548	.9550
290	.9553	.9555	.9558	.9560	.9562	.9564	.9567	.9569	.9571	.9574
295	.9576	.9578	.9580	.9582	.9585	.9587	.9589	.9591	.9593	.9595
300	.9598	.9600	.9602	.9604	.9606	.9608	.9610	.9612	.9614	.9616
305	.9618	.9620	.9622	.9624	.9626	.9628	.9630	.9632	.9634	.9636
310	.9638	.9640	.9641	.9643	.9645	.9647	.9649	.9651	.9653	.9654
315	.9656	.9658	.9660	.9662	.9663	.9665	.9667	.9669	.9670	.9672
320	.9674	.9675	.9677	.9679	.9680	.9682	.9684	.9685	.9687	.9689
325	.9690	.9692	.9694	.9695	.9697	.9698	.9700	.9701	.9703	.9704
330	.9706	.9708	.9709	.9711	.9712	.9714	.9715	.9717	.9718	.9719
335	.9721	.9722	.9724	.9725	.9727	.9728	.9729	.9731	.9732	.9734
340	.9735	.9736	.9738	.9739	.9740	.9742	.9743	.9744	.9746	.9747
345	.9748	.9750	.9751	.9752	.9753	.9755	.9756	.9757	.9759	.9760
350	.9761	.9762	.9763	.9765	.9766	.9767	.9768	.9769	.9771	.9772
355	.9773	.9774	.9775	.9776	.9778	.9779	.9780	.9781	.9782	.9783
360	.9784	.9785	.9786	.9788	.9789	.9790	.9791	.9792	.9793	.9794
365	.9795	.9796	.9797	.9798	.9799	.9800	.9801	.9802	.9803	.9804
370	.9805	.9806	.9807	.9808	.9809	.9810	.9811	.9812	.9813	.9814
375	.9815	.9816	.9817	.9818	.9819	.9819	.9820	.9821	.9822	.9823
380	.9824	.9825	.9826	.9827	.9827	.9828	.9829	.9830	.9831	.9832
385	.9833	.9833	.9834	.9835	.9836	.9837	.9838	.9838	.9839	.9840
390	.9841	.9842	.9842	.9843	.9844	.9845	.9845	.9846	.9847	.9848
395	.9848	.9849	.9850	.9851	.9851	.9852	.9853	.9854	.9854	.9855

FRACTIONAL INGROWTH OF Y-90 INTO SR-90

HOURS	HOURS 0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
400	.9856	.9857	.9857	.9858	.9859	.9859	.9860	.9861	.9861	.9862
405	.9863	.9863	.9864	.9865	.9865	.9866	.9867	.9867	.9868	.9869
410	.9869	.9870	.9871	.9871	.9872	.9872	.9873	.9874	.9874	.9875
415	.9876	.9876	.9877	.9877	.9878	.9878	.9879	.9880	.9880	.9881
420	.9881	.9882	.9883	.9883	.9884	.9884	.9885	.9885	.9886	.9886
425	.9887	.9888	.9888	.9889	.9889	.9890	.9890	.9891	.9891	.9892
430	.9892	.9893	.9893	.9894	.9894	.9895	.9895	.9896	.9896	.9897
435	.9897	.9898	.9898	.9899	.9899	.9900	.9900	.9901	.9901	.9901
440	.9902	.9902	.9903	.9903	.9904	.9904	.9905	.9905	.9906	.9906
445	.9906	.9907	.9907	.9908	.9908	.9909	.9909	.9909	.9910	.9910
450	.9911	.9911	.9911	.9912	.9912	.9913	.9913	.9913	.9914	.9914
455	.9915	.9915	.9915	.9916	.9916	.9916	.9917	.9917	.9918	.9918
460	.9918	.9919	.9919	.9919	.9920	.9920	.9921	.9921	.9921	.9922
465	.9922	.9922	.9923	.9923	.9923	.9924	.9924	.9924	.9925	.9925
470	.9925	.9926	.9926	.9926	.9927	.9927	.9927	.9928	.9928	.9928
475	.9928	.9929	.9929	.9929	.9930	.9930	.9930	.9931	.9931	.9931
480	.9931	.9932	.9932	.9932	.9933	.9933	.9933	.9934	.9934	.9934
485	.9934	.9935	.9935	.9935	.9935	.9936	.9936	.9936	.9937	.9937
490	.9937	.9937	.9938	.9938	.9938	.9938	.9939	.9939	.9939	.9939
495	.9940	.9940	.9940	.9940	.9941	.9941	.9941	.9941	.9942	.9942
500	.9942	.9942	.9942	.9943	.9943	.9943	.9943	.9944	.9944	.9944
505	.9944	.9944	.9945	.9945	.9945	.9945	.9946	.9946	.9946	.9946
510	.9946	.9947	.9947	.9947	.9947	.9947	.9948	.9948	.9948	.9948
515	.9948	.9949	.9949	.9949	.9949	.9949	.9950	.9950	.9950	.9950
520	.9950	.9951	.9951	.9951	.9951	.9951	.9951	.9952	.9952	.9952
525	.9952	.9952	.9952	.9953	.9953	.9953	.9953	.9953	.9954	.9954
530	.9954	.9954	.9954	.9954	.9954	.9955	.9955	.9955	.9955	.9955
535	.9955	.9956	.9956	.9956	.9956	.9956	.9956	.9957	.9957	.9957
540	.9957	.9957	.9957	.9957	.9958	.9958	.9958	.9958	.9958	.9958
545	.9958	.9959	.9959	.9959	.9959	.9959	.9959	.9959	.9959	.9960
550	.9960	.9960	.9960	.9960	.9960	.9960	.9960	.9961	.9961	.9961
555	.9961	.9961	.9961	.9961	.9961	.9962	.9962	.9962	.9962	.9962
560	.9962	.9962	.9962	.9963	.9963	.9963	.9963	.9963	.9963	.9963
565	.9963	.9963	.9964	.9964	.9964	.9964	.9964	.9964	.9964	.9964
570	.9964	.9964	.9965	.9965	.9965	.9965	.9965	.9965	.9965	.9965
575	.9965	.9965	.9966	.9966	.9966	.9966	.9966	.9966	.9966	.9966
580	.9966	.9966	.9966	.9967	.9967	.9967	.9967	.9967	.9967	.9967
585	.9967	.9967	.9967	.9967	.9968	.9968	.9968	.9968	.9968	.9968
590	.9968	.9968	.9968	.9968	.9968	.9968	.9968	.9969	.9969	.9969
595	.9969	.9969	.9969	.9969	.9969	.9969	.9969	.9969	.9969	.9969

FRACTIONAL INGROWRH OF Y-90 INTO SR-90

	HOURS									
HOURS	0.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
600	.9969	.9970	.9970	.9970	.9970	.9970	.9970	.9970	.9970	.9970
605	.9970	.9970	.9970	.9970	.9970	.9970	.9971	.9971	.9971	.9971
610	.9971	.9971	.9971	.9971	.9971	.9971	.9971	.9971	.9971	.9971
615	.9971	.9971	.9972	.9972	.9972	.9972	.9972	.9972	.9972	.9972
620	.9972	.9972	.9972	.9972	.9972	.9972	.9972	.9972	.9972	.9972
625	.9972	.9973	.9973	.9973	.9973	.9973	.9973	.9973	.9973	.9973
630	.9973	.9973	.9973	.9973	.9973	.9973	.9973	.9973	.9973	.9973
635	.9973	.9973	.9974	.9974	.9974	.9974	.9974	.9974	.9974	.9974
640	.9974	.9974	.9974	.9974	.9974	.9974	.9974	.9974	.9974	.9974
645	.9974	.9974	.9974	.9974	.9974	.9974	.9974	.9975	.9975	.9975
650	.9975	.9975	.9975	.9975	.9975	.9975	.9975	.9975	.9975	.9975
655	.9975	.9975	.9975	.9975	.9975	.9975	.9975	.9975	.9975	.9975
660	.9975	.9975	.9975	.9975	.9975	.9975	.9975	.9975	.9975	.9976
665	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976
670	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976
675	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976
680	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976	.9976
685	.9976	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977
690	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977
695	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977
700	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977
705	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977
710	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977
715	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977	.9977
720	.9977	.9977	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
725	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
730	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
735	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
740	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
745	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
750	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
755	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
760	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
765	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
770	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
775	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
780	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
785	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
790	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978
795	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978	.9978